



# THE CULTIVATOR.

FORBES. VAN FRANKEN, N.Y.

THIRD

To Improve the Soil and the Mind.

SERIES.

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No. VI.

## Rust in Wheat Prevented by Draining.

**T**HE following suggestions, which we copy from a letter of an eminent agriculturist in Western New-York, whose soil is a strong, rich, clayey loam, opens a subject of much interest to wheat growers. The facts presented may not be wholly new to some; but the leading principle which they support may not before have attracted attention, or been so distinctly held up to view:

"I have learned that wheat, in the light and gravelly districts of Western New-York, suffers very little, if any, from rust or mildew; while with us, the two great causes of damage, are *rust* and *winter-killing*. I have been thinking over the subject; and as we know that under-draining is a cure for the latter, may it not also be a cure for the former?

"We have little if any land in this district of country, which does or has not required under-draining. Now the point to which I wish to direct attention is, whether the exemption from rust is not owing to the dryness of the soil and sub-soil? If it should prove to be so, then we have an additional inducement to under-drain.

"I had some under-drains made in a piece of land that was originally a black ash swamp, and had a mucky soil—and from such, wheat is very liable to be ejected in winter. Yet over one of these drains I observed last spring that the wheat stood thick and undisturbed, while much at a short distance was severely injured.

"There is a tract of gravelly land between Lockport and Batavia, which I think is underlaid by plaster beds—a sort of *oak openings*—which is famous for producing wheat. It is worthy of inquiry whether *rust* is destructive there or not.

"In those dry Asiatic or African countries, where there is not moisture enough to encourage the growth of *rust* or *mildew*, it might be difficult to determine how much the soil or subsoil has to do with the matter; but if it could be shown that

in our moist climate under-draining is able to counteract its defects on so important a point as the growth of wheat, the discovery would act as a powerful stimulus on our farmers.

"I may add, that under live trees, where roots keep the ground firm [by preventing much cultivation] and comparatively dry, wheat is neither liable to be thrown out in winter, nor injured by rust; and generally along our swales where there is the most moisture there is the most rust.

"When I removed to this country, I had no idea that our land would ever need draining, but this was when the ground was full of roots. Since these rotted out, there has been a settling down of the soil,—an intelligent neighbor thinks it has settled four inches in the last ten years, though I have no means of telling how much. I only know that I have fields which I would not now think of sowing with wheat, but to which purpose I should have made no objection ten years ago.

"All I intend by these remarks is to excite observation and reflection, and not to build up an opinion or theory."

## Culture of Indian Corn.

As the time for planting corn is approaching, and being myself a practical farmer of some experience, I have thought it might not be amiss to state to my brother farmers, through the medium of your widely circulating papers, the mode in which I have for many years past been most successful in raising this valuable crop. It is this:

I take a meadow, or pasture, on which the grass is getting thin; cover it as thick with manure as can well be plowed under; then proceed to plow about six or eight inches in depth, taking care to have every furrow laid completely over. If the ground be uneven, or not well plowed, I follow with a heavy roller, which closes many a crevice and prevents the grass from choking the young plant, and also prevents the harrow, which immediately follows lengthwise the furrow, from disturbing the sod. After completing the field in

this manner, if not perfectly mellow and smooth, it is either cross-harrowed or gone over with a two-horse cultivator lengthwise the furrow, which most effectually accomplishes the object.

The ground should be plowed thus deep for two reasons. First, in the spring, after planting, and while the corn is coming up, should the season be wet and cold, the water settles underneath the furrow, which prevents the seed from rotting, or the plant from drowning, as is frequently the case. And second, in the summer, should it be very dry, as is frequently the case after a wet spring, the root of the plant penetrates the deep mellow earth to where the fermentation of the manure and sod creates a moisture that steadily forces the corn on to maturity.

Corn ground, however, should not be plowed so deep as to throw up subsoil, that being of too cold a nature—but for wheat is highly beneficial.

I mark my corn ground both ways, the rows about three feet four inches apart, taking great care to have them perfectly straight, that the cultivator or plow may be less liable to disturb the hills while tending it. In planting, five or six kernels should be put in a hill, and covered with mellow earth—dry lumps and stones are hard things for a tender plant to contend with. Some farmers might think six kernels too many; and so it would be if all grew; but they do not always, and if they do, it is easier to pull out than put in. It is well to mix plentifully with pumpkin seed, as they injure the crop but little, and are thought by most farmers to go far to lessen the expense of raising the corn.

When the corn is sufficiently advanced to see the rows, it is passed through, twice in a row both ways, with a one horse, steel-tooth cultivator. This destroys the grass and weeds, if any, between the hill, and a few men will soon eradicate what remains in the hills. It is then dressed with about a table spoonful of composition, of equal parts, lime, plaster and ashes, which serves, when sufficiently moistened by rain, to drive the grub and wire-worm from the hill, if any there be, and hasten rapidly forward the plant. In about two or three weeks it is passed through again, either with a cultivator or light plow, both ways, twice in each row. This time, one hand with a hoe to cut an occasional weed or thistle, and to straighten up any hills that may be disturbed by the horse or plow, will do all that is necessary. When it is about, or a short time previous to, its tasseling out, it is plowed one and sometimes both ways, deep, turning the furrow toward the hill. This, with a little labor with the hand hoe, will cause the stalk to throw out its brace roots higher up, which keeps it in a perpendicular position, and aids very materially in facilitating the cutting, should that be performed, or in husking, should it not. It is then left to ripen.

When the ears are about three-fourths glazed, it is cut up near the ground, and from thirty to forty hills put in a shock, and tied securely at the top with a band of straw—not with grass, weeds, or a stalk, as many do—and left to cure.

It may be thought by many farmers, that the period for harvesting which has been mentioned is too early to secure the greatest weight of grain; to which may be said in answer, that the stalk being separated from the root while green, much of its vitality will be drawn by the unripened ear, and bring it to maturity. Consequently, in most

cases, a greater gain is realized than when endangered longer by early frost.

Corn raised after the above manner, frequently yields me —\* bushels of shelled per acre; and the stalks are equal for fodder to from one and a half to two tons hay per acre. C. *Lansingville, Tompkins Co., April 23, 1853.*

#### Practical Farming—No. 2.

MR. TUCKER—In my last, I told you that it was better to stock land lightly—better to have six cattle increase 1,800 lbs. in six months, than to put eighteen on the same land, to increase the same number of pounds. But 300 lbs. per beast, can not be gained by six months pasturage, unless the cattle have been well kept through the previous winter; but if fed from ten to twenty bushels of corn, oat or barley meal, according to age—the youngest of course requiring least, the rapidity with which they will take on fat when turned out to grass will astonish every one not accustomed to feeding cattle.

I also stated that grass, when lightly pastured, was a cheap way of improving worn-out lands. I repeat, it is a cheap way; but the fertility thus required will not last like barn-yard manure, provided the stock kept in the yard has been well fed. If fed nothing but straw, as is the practice of many farmers, it would be better to keep no stock, and to supply the straw at once for manure, but let from ten to fifteen bushels of meal be fed to a two-year old steer, even with straw for the first three months—say to first of March—with good hay or cornstalks afterwards, and he will, at the average of prices for years past, bring, after being grass-fed, from \$10 to \$15 for the meal—that is, he will bring in market, at the end of July or early in August, \$10 to \$15 more than if fed no meal.

Sheep do much better on straw and grain than cattle. If fed with good bright straw, with a bushel of corn to the hundred sheep per day, or its equivalent in oats, barley, buckwheat or *peas*, —(50 lbs. of the latter I think as good as 60 lbs. of corn)—they will continue to gain from the time they are put in the yard until the first of March, when they ought to be fed with hay. Still I am opposed to feeding straw, as it lessens the quantity of manure, and enough more hay and grain can be raised by making all the straw into manure, to feed more than all the straw would feed. Besides this, the straw is required for bedding for the animals. Feed is lost on cattle and sheep, if only wet and dirty yards are provided for them to lie in; neither will lie down in such, until they are so much exhausted that they can stand no longer; and of course they cannot *thrive* unless made comfortable. To keep stock profitably, they must be well cared for, and be provided with dry, clean beds.

By the above mode of feeding, manure enough can be made to increase the productiveness of the farm from year to year; and if our farmers would only make all the manure they can on their own farms, they would have no occasion to resort to guano or chemical manures. It may perhaps be profitable to import guano, and to apply to chemists to manufacture manures, in Great Britain, where produce enough cannot be raised to feed the population; but not so in this country, where we raise a large surplus for exportation, and a great deal that is worse than wasted in manufacturing

intoxicating drinks. If our farmers would convert their coarse grains into mutton, pork and beef, I believe they would find it more to their profit than selling them.

I notice by papers recently received, that England imported less guano by 100,000 tons, in 1852 than in 1851. It appears to me that it cannot be very profitable, as it only increases the crop for one year, and that barely enough to pay the cost, whereas, barn-yard manure will enlarge the crop for many years. JOHN JOHNSTON. *Near Geneva, N. Y.*

**Shall I Cut my Seed Potatoes?**

MR. TUCKER—I have never found time to investigate this subject until during the last summer. I wish now to give you some of the results of these investigations, and the reasoning connected with them.

1. The difference between a proper seed and a potato tuber, (and many other tubers also) is this: A seed has one vital point whence the plant must start. A tuber has as many vital points as buds or eyes, and may be cut into as many parts, each of which may be made to grow. The vital energy located about the eye, and the storehouse of nutriment, usually in the shape of starch, treasured up in the pulp, being sufficient for this purpose.

2. Nature does not seem to have intended, ordinarily, that *all* these eyes should grow. The number seems to be a provision against accident, just as in the case of fruit trees. If a part of the buds or eyes of either are destroyed, the others are forced into growth. A potato is in its most perfect condition when a single eye grows and receives the support of the whole tuber. The vines, in the end, will be as numerous and wide-spread as though more had grown. Usually, however, a large proportion of the eyes do grow, especially under generous culture.

3. The eye of the potato, just like a true seed, depends upon the nutriment stored about the vital point for the impulse that throws out the plant—the sprout upward, the root downward. In the case of a proper seed, water must be absorbed first; in the case of the potato that water is already in the tuber, and can not be absorbed through its skin, which is as impervious to water as India rubber.

4. Now, if we cut potatoes for seed, particularly if we cut them very small, say into single eyes, then we subdivide the whole nutriment of the tuber into as many portions as the tuber has eyes. Instead, therefore, of each bud that grows having the nutriment that belonged to two or three, as is often the case when whole tubers, or the half of very large tubers are planted, it is stinted to its own individual proportion of the whole tuber. The same reasoning applies to the use of very small potatoes for seed.

In strict accordance with this reasoning, every observant cultivator of potatoes has noticed that in the use of seed cut very small, or of very small whole tubers, the early growth of his plants was slow, and for a time spindling. In such cases a good soil, careful culture, and a long season, may bring up the plant to a sturdy growth and a large yield. It cannot but be seen, however, that in case the season is short, or otherwise bad, or the variety planted a late one, and especially if the culture be careless, the crop is greatly jeopardised.

5. Still more does this reasoning find enhance-

ment in the fact that by this use of cut or small seed, the season of tubering is made from one to three weeks later than it otherwise would be, and thus the health and yield of the crop, and often the table quality of the tuber is endangered.

6. It is obvious to every cultivator, that cut seed is exposed to danger in cold and wet springs, it being well ascertained that the cut surface of a potato withstands the action of cold and wet much less perfectly than the natural skin of the potato. In good weather I have not found cut potatoes rot, since not more than one in two hundred has failed to grow.

The conclusion of the whole matter then seems to be this. If you cannot get the desirable quantity of seed, or if you have a very choice variety which you wish to increase as fast as possible, cut your seed, and also plant the very small ones. If the variety planted matures early, you have also the more hope of success. So, also, if it be a very hardy sort, success will be the more probable. It will well pay cost, if, in planting such cut or small seed, you have a little rich compost at hand, to put around the seed when planted. This will in some degree make good the feebleness of the mother tuber.

It seems to me that facts, and the foregoing course of reasoning, settles the whole question beyond a doubt. Should other cultivators have come to a different conclusion, I hope they will enlighten agriculturists with their reasons. C. E. G. *Utica, March 11, 1853.*

**Osier Willow.—Its Preparation for Market.**

BY C. N. BEMENT.

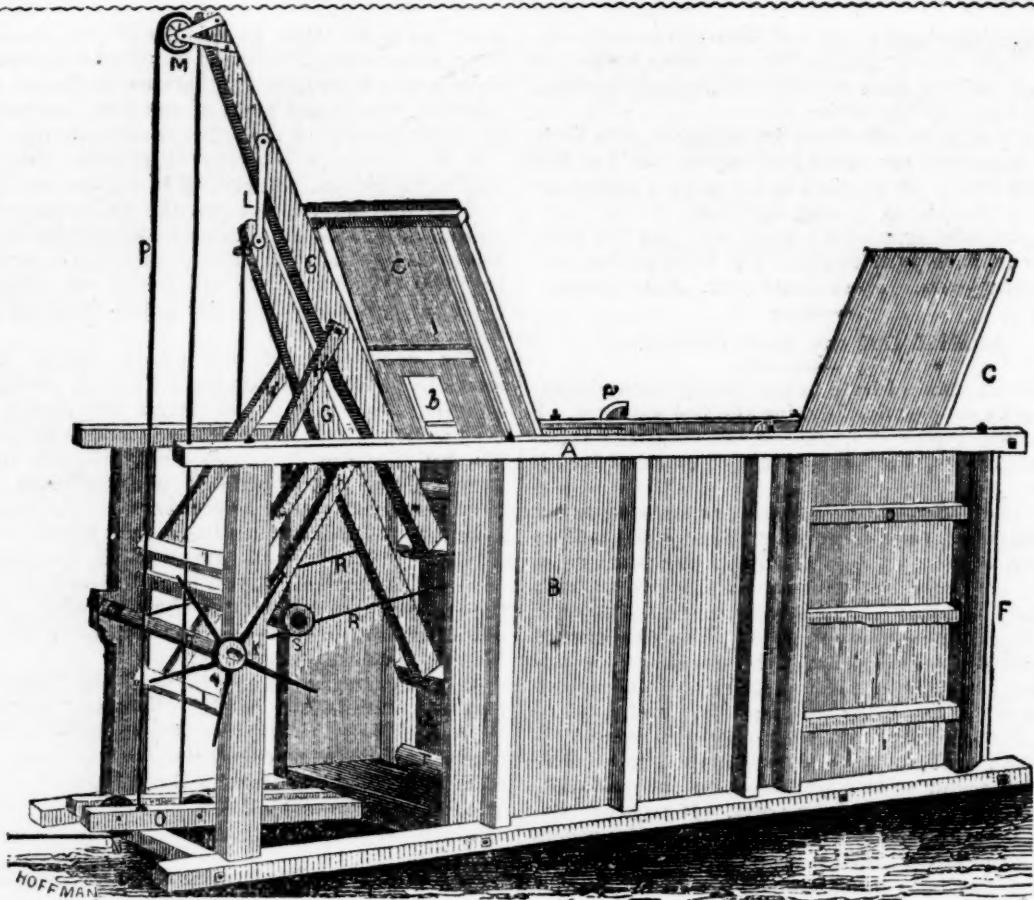
In a former communication in the 5th No. of the *Country Gentleman*, on the cultivation of the Osier Willow, I omitted giving the method of preparing them for market.

The best time for cutting is in the spring, just as the sap begins to run. When wanted for baskets only, they should be cut every spring. After a new bed is planted, the first years' growth will be small, but will increase in number and size the following years, as the stumps grow larger. Where large willows are wanted for making the frames of cradles, wagon bodies, &c., they should be cut only every second year.

After cutting they should be bound in convenient size bundles, with some of the small sprouts, and the butt ends set in a wet place, to prevent the bark from tightening before it is convenient to strip or peel them.

The process of stripping off the bark is very simple, and may be performed by a boy ten years old. All children are fond of this work, and often make quite a frolic where there are several employed on as many benches, striving who can peel the greatest number in a given time.

The machine for stripping is also quite simple, being nothing more than two pieces of tough, sound wood, forming two parts of a triangle, opening about one inch at the top, and coming close together at the bottom, like the letter V. Inside of each prong must be inserted a small piece of round iron, or large size wire, leaving about one-half of its diameter projecting from the wood; the irons coming close together at the bottom of the crotch. This machine should be firmly fixed in the end of a strong wooden bench, something similar to that used by coopers for shaving hoops.



When worked, a bundle of willows, washed from the mud, should be placed parallel with the bench, the operator sitting astride of it, and draw the sprouts through the machine, letting them sink to where the irons will grasp the bark. In most cases, once drawing the sprout through, the bark will strip off; if not the sprout should be turned and drawn through where the bark adhered.

After stripping, the willows should be spread in a clean dry place, until the moisture has evaporated, to prevent mould or mildew, and then put up in bundles of from fifty to eighty pounds, carefully bound at several places with some of the sprouts, to prevent breakage or damage in moving them. Sometimes it is necessary to boil or steam them before stripping, which bleaches them at the same time. It will now be fit for market, and should command from three and a half to four dollars per hundred pounds. *Albany, April, 1853.*

#### Dederick's Patent Parallel Lever Press.

In a previous number we presented a cut of a Stationary Hay Press, invented by Mr. Dederick of this city. The above cut represents a recent invention of Mr. Dederick, first exhibited in model at the State Fair at Utica, in Sept. last, constructed so as to press with a single lever from both ends towards the center; since which time he has improved it so as to obviate some material objections, such as the enormous friction produced by keeping the follower vertical by guards, and the liability to break, caused by the entire resistance of the hay being sustained by the levers, as will be seen by the following description: "The cut represents the press as open and ready for filling. A is the frame, B the box containing the

hay to be packed; C are doors opening the whole length of the box, through which the press is filled, and are closed down when full; D are side doors, through which the bale is hooped and removed; E is the follower or slide, resting only upon the friction roller T; F is the head of the press, between which and the follower E, the pressure is exerted, each sustaining one-half the resistance of the hay. The parts G G, H H H H, together form two parallel toggle joints, secured at their extremities into axles I I, and J J, and confined together by the connecting bars L. Thus confined, they keep the follower vertical without guards, notwithstanding the hay may be unequally compact, and would operate the same were the box only half full. The rope or chain is fastened to the lower lever G, thence it passes around the shieve M, and under shieve N, to a capstan or snatch block, as may be desired. The power being applied to the rope, the levers are depressed until they lie horizontal, when the bale is packed, standing on its end. Q is a winch; R R are ropes attached to the follower E, and are secured to, and wind up on the winch Q. Upon these ropes rests a roller S, extending across beneath the levers, and is carried down by them, depressing ropes R R. By means of this winch and roller S, through the genicular power of the ropes, the levers are raised with the greatest ease by one person. The whole press is 12 feet long, and 4 feet 10 inches in height, and will pack bales of 300 lbs. each. From six to eight tons per day may be packed, according to circumstances." Price, all complete for use, and warranted to give satisfaction, \$125, at the shop.

Further particulars may be obtained by letters addressed to the inventor, Albany, N. Y., or by calling at his shop, No. 58 Bleecker street.

**Orchard Grass.—*Dactylis glomerata.***

LEWIS SANDERS, Esq., the well known farmer of Grass Hills, Kentucky, gives in a late Louisville paper, the results of more than thirty years experience with the different varieties of grasses. After testing thoroughly a vast many sorts, he gives a decided preference to Orchard grass, and we copy what he says of it, together with his directions for saving the seed and sowing it. We should be glad to learn whether the experience of farmers in other sections of the Union agrees with that of Mr. Sanders in Kentucky:

My observation and experience has induced me to rely mainly on orchard grass and red clover; indeed, I now sow no other sort of grass seed. Blue grass and white clover are indigenous to our soil—they come in of themselves. I do not look upon them by any means as intruders, but grand auxiliaries; these, with orchard grass and red clover, make the best pasture.

Orchard grass and red clover mixed make the best hay of all the grasses for this climate, [Kentucky;] it is nutritious, and well adapted as food for stock. I prefer orchard grass to all others; it is ready for grazing in the spring, ten to twelve days sooner than blue grass, or any other that affords a full bite. When grazed down, and the stock turned off, it will be ready for regrazing in less than half the time required for blue grass. It stands a severe drouth better than any other grass; when all other sorts are dried up for the want of rain, it keeps green and growing. In summer it will grow more in a day than blue grass will in a week. If the ground is properly prepared, a sufficiency of seed sown on it, the orchard grass takes possession and keeps it. It will not spread, but it keeps out noxious weeds and intruders. I think it is from its abundant roots that most of its good qualities are derived.

**Sowing the Seed.**—Prepare the ground nicely by frequent plowing and harrowing, as is customary in sowing flax or hemp, as early in the spring as convenient; the sooner the better. Sow one bushel and a half of orchard grass seed to the acre, and three or four pints of red clover seed. It is of great importance that the seed be cast uniformly over the ground. Mark off in suitable widths for a cast of light seed; sow half the seed, then mark off crosswise, and sow the remainder. Sow the red clover seed at the same time, but separately. If the ground should be cloddy, the back of a two horse harrow would be better.

Orchard grass is naturally disposed to form and grow in tussocks. The best preventive is a good preparation of the ground, and a sufficiency of seed uniformly sown.

Weeds will spring up in May, wherever strong, and will crowd and perish out the young plants of orchard grass. To remedy this evil it is absolutely necessary to go over the ground with a keen scythe, and mow down weeds, grass, and all, as if you were mowing a meadow for hay. This should be done early in June, according to the season. There will then be fine fall grazing for young stock.

This work done, you will have a fine plat for either a permanent meadow, or for pasturage. Every farmer ought to raise his own grass seed, and have some to sell, which will soon be the case

if a few bushels of seed only are procured and put in as I have described. He can then sow his seed how and when he pleases, and a little experience will teach him the best time and the best method. Grazing orchard grass after the middle of January, diminishes the yield of seed.

**To save the Seed.**—The seed head does not ripen regularly; if let to stand too long, much of the best seed shatters out; if cut too early, the seed in the lower part of the head is immature—practice, with judgment, will fix upon the right time. The seed stem puts up above the blades of the grass, and the heads of clover. An expert cradler is best—the sickle may be used—tie up in sheaves—put about twenty-five in a shock, no cap—to remain a short time—some of the immature seed will ripen in the shock. After all the moisture is exhausted, it is then ready for thrashing or treading out. With the rake and hay fork you get off the straw—there is not much chaff. I use three sizes of riddles; the first a coarse one to get clear of the remaining straw, &c., then pass it twice through a finer one, allowing the seed to pass through easily; then use the fine riddle, freeing the bulk from imperfect seed and dust. It is now ready for barreling or for sacks; it ought not to remain in a large bulk.

As soon as the seed is cut mow for hay; the sooner after the seed is cut the better. The second crop will be the better by mowing the field soon after the seed is cut. This second crop should be the main reliance for hay for the farm, and there is no grass that produces such good hay for every kind of stock, horses and mules included.

Orchard grass is not a good *Binder*; if sown on steep hill sides, a plentiful cast of blue grass seed should be sown with it.

The late Judge Peters of Pennsylvania, (who was at the head of all agricultural improvements in that great state for many years,) preferred it to all other grass. So did that spirited and intelligent gentleman, John Hare Powell, of cattle celebrity, of the same state.

**Experiments with Potatoes.**

For several years my potatoes have failed with the rot. In the fall of 1851, I thought I would try my hill land, without manure. I took my team, plow and drag, and measured off 150 square rods of ground, and commenced plowing as deep as the plow would go, about nine inches. The next May, I dragged it until the top was very mellow. I then took the one-horse plow and marked it out three feet square. As seed was hard to be got at one dollar per bushel, I procured three bushels of very small potatoes, and all that I could find that was as large as a good sized hickory-nut, I cut in pieces and put three pieces in a hill. I had one half bushel of quite large potatoes; these I cut and planted by themselves, which made three and a half bushels of potatoes, all told. These I planted on 149 square rods of ground. I planted the middle of May. When my potatoes were up about four inches high, I plowed them out both ways with the small plow, and hoed them very well; I then took half a bushel of unleached ashes and half a bushel of plaster and mixed together, and put about one large table-spoonful on the side of each hill, except two rows through the middle of the piece, on which I put nothing. In about two weeks I plowed them out again both ways,

two furrows in each row; hoed as before, and then took three pecks of unleached house ashes and put on the side of each hill as before, except the two rows, and this was all that did to them. The two rows that I did not put anything on, looked quite sickly and yellow, and the tops were about 12 to 15 inches high. The other tops were very large and rank; some of them three feet long. I commenced digging the fourth week in October, and dug the two rows that I put nothing on first, and got three bushels and a half and three quarts, all told. The next two rows that I plastered and ashed, nine bushels and a half and five quarts, making more than two-thirds difference in the two rows. I dug from the piece, two hundred and fourteen bushels of the best potatoes that I ever dug—not one but what was sound. The small potatoes that I planted gave as much to the hill as the large ones, but more small ones in the hill. The large potatoes gave me large potatoes again. This is the first of my book farming. I intend to try again, and will tell you what luck I have. J. F. HOPKINS. *Catharines, March, 1853.*

#### Extermination of Weeds.

My thoughts, and to some extent my labors, have been brought into action during a few of the past seasons, for the purpose of devising some efficient method to "kill out" those soil impoverishing weeds, which, by *careless culture and thriftless management*, have nearly over run some of the farms with which I am acquainted. It is not uncommon to see whole fields bearing such a crop as *mullen*, for instance, as would have been creditable to the owner, had his ground produced as great a burthen of Indian corn! Nor is the mullen alone entitled to such pre-eminence; for other weeds are occupying the ground, and usurping the nourishment from the soil, which ought to be applied to better purposes.

In my efforts, I have had in view more particularly, that most noxious plant called yellow weed, negro weed, snap dragon, and other "hard names." It is, I believe, considered by farmers in this region, the greatest *dread* of all the weedy tribe. It commonly grows in thick patches, has a small stalk from twelve to eighteen inches in height, and at its top has a rich cluster of gaudy yellow blossoms. Its seeds are thin and light, like those of the parsnip—small, and of dark color. It is presumed that a smart gust of wind will carry them a fourth of a mile. Thus it spreads.

I do not, however, fear the enemy when he shows his front in the open field; but when he fortifies himself by stone walls, or ledges of rock, or extends his lines along the road side, I admit him to be a formidable foe.

But how to subdue him is the question. My method to extirpate this and other weeds, is to sow buckwheat as early as I dare—on account of frost—and as soon as it becomes fully blossomed plow it under, and sow with buckwheat a second time, covering the seed with a "bush," lest the harrow should drag out the green crop. If the land is in "good heart," this crop may be harvested at about the usual time; if not, plow under again, and sow wheat or rye. These three successive plowings, together with the vigorous growth of the wheat, will do as much toward effecting the object, as any method which I have tried; and if the two crops of buckwheat are

well turned in, will put the land in good condition for winter wheat or rye. L. HINE. *Cairo, N. Y., Feb. 1853.*

#### Ashes, Lime, &c., for Corn.

I tried an experiment on my corn last summer, with ashes, lime and plaster, and was so well satisfied myself, I thought, perhaps, you might think it worth a place in your paper. I mixed equal quantities of slaked lime, ashes and plaster, and put about a gill on a hill, when the corn first came through the ground.

When putting on the ashes, &c., I left four rows; and when the corn was harvested, I kept these rows separate, and took two rows on each side of the four and husked them separately. The difference of yield in favor of that which was ashed, &c., was at the rate of about ten bushels to the acre. The difference in color could be seen all summer, as far as the rows could be distinguished. HENRY S. BUNT. *Norway, Herkimer co., N. Y., March 10, 1853.*

#### Directions for Cultivating Seedling Potatoes.

1. Soak the seeds in lukewarm water six or eight hours, then mix them with sand or fine earth, to give them body, so that they may be sown thinly and evenly. Sow in as clean ground as possible, or you will lose them in weeding. Cover lightly, and press the earth upon the seeds, marking the exact place of the rows very accurately. Potato seed, if well saved, is very sure, but slow in sprouting. They will be fit to weed the first time, in from three to four weeks. Sow different sorts separately. Give the whole ground of your bed to them.

2. Sow in Central New-York the middle of April; but earlier farther south. Transplant in six weeks. The plants are as hardy as tomatoes, and may be transplanted similarly, taking earth up with them when you can, and having first hardened them to the air before removal. Shield them from the hot sun with any large leaves or shingles, until they get rooted. Transplant into a fair soil, but not a rich one, as a moderate growth is stronger than a rapid one. Use a handful of rich compost about the young plant, to give it a start.

3. If sown in Central New-York use a moderate hot bed, or sow as late as May 10th in a cold bed under glass. Farther south, sow out of doors as you would cabbage.

If you sow under glass, be sure to shade from the hot sun in the middle of the day. Do this with straw sprinkled lightly over the glass, or with narrow boards. Begin before the seed are up, and continue as long as they are in close beds. Out of doors this is not usually needful. Few plants suffer so much from hot sun as young potatoes.

4. In transplanting, prepare your ground by deep plowing. Lay off your furrows three feet apart. If possible, run a small sub-soil plow through the bottom of your furrow, to give depth to your culture. Place your plants two feet apart in the row, and but one plant in a place. Do not use poor plants if you have a tolerable supply. Set your plants a little deeper than they grew.

5. As soon as they take root, hoe, and hoe and plow frequently until they are in flower, after which do nothing more than superficially hoe up

the weeds. I advise not to hill potatoes in dry ground.

6. Dig early; it may not be quite so early as you do common field crops, but before they are injured by wet, dark, and damp weather. Remember that a seedling potato the first year, sets and matures its tubers mostly after regular field crops have got their growth. Seedlings dug somewhat early will not be so large, but they will be much more healthful than when dug later.

Late dug seedlings are often a little diseased, not from constitutional weakness, but by a law applicable to all tropicals when grown in unpropitious weather.

7. In the fall dig each hill alone. Having dug a plot, go over it once and again, most deliberately, throwing out every hill that seems *weak, ill-shaped, yellow fleshed, or spreads widely in the ground, or is small and immature.*

A seedling well cultivated the first year, and yet making small tubers, will never afterwards ripen in season.

Save each hill separately, that is, put such good hills as can readily be separated, together, to the amount of three or four. Put these separate parcels in dry sand in a barrel, putting strips of shingle between the parcels. In this way store the whole. Throw away the small tubers of even your good hills: they would be more trouble than profit.

9. Some of your good sorts will be tolerably eatable when two seasons old, others will require from three to four years growth, just as in the case of many fruits.

10. Good seed yields a very variable proportion of plants. In my experience it has varied from one-fifth to four-fifths of the seed sowed.

11. Potatoes cultivated in this manner will mostly gain an eatable size the first year. C. E. G. Utica, 1853.

#### Contributions of Science to Agriculture.

BY SAMUEL W. JOHNSON.

The actual contributions of science to agriculture, are not so numerous as might be judged, from its applications to other arts. Most of the processes of improved farming, though belonging to the science of agriculture, and capable of explanation by it, originated with practical and not professedly scientific men. Yet all practical processes are scientific, so far as founded on truth, and many of them were discovered by the same methods that are used by the philosopher in arriving at new facts and principles.

Plowing, spading, manuring, draining, irrigation, have been in use, in a more or less perfect manner, from the earliest times.

If we may credit the reports of travelers, or if we admit the adequate support of their dense population, the Chinese are to this day unexcelled in the perfection of their husbandry. It is certain that they have attained great excellence in many arts, as the manufactures of porcelain and of silk, which originated with them. Yet they are entirely unscientific. These arts are with them the slow growth of centuries, the result of accident, or of rude and undirected experiment; and though so perfect, it should be remarked that they are rivaled, and in many points excelled by the similar manufactures of Europe, though the latter are of very recent origin.

Among the reasons that explain the very limited

advantages that science has furnished to agriculture, should be noticed principally the *infancy* of science; chemistry, geology and the other natural sciences, have only within half a century assumed such shape as to promise much to the farmer. This *infancy* has not prevented science from assisting the other arts. It has been of great service to them so far as its aid has been sought. The great companies that carry on mining operations, print works, &c., having abundance of capital, concentrated in a small space, can afford to employ chemists at large salaries, to invent processes that shall increase their profits; more especially since they can keep secret, and monopolise any valuable methods that may be discovered. The principles and details involved in the chemical arts are not so numerous and complicated as are those that affect the various branches of husbandry, and therefore admit of more easy investigation. Scientific agriculture can not be greatly advanced, except by experiments on a large scale. Very few individuals unite the pecuniary and intellectual qualifications requisite to conduct extensive experiments successfully.

Boussingault of France, and Lawes of England, both wealthy landed proprietors, have carried through many interesting and valuable experiments; but their investigations need criticism and repetition to settle their value.

The mere chemist is not fully adapted to advance the science of agriculture; for although chemistry, more than any other one department of science, may promise profit to the farmer, yet it alone is not sufficient. No one can properly attempt agricultural researches who has not a practical knowledge of the usual and the approved methods of farming.

It is not a wonder that scientific men, who are greatly occupied with the duties of the College and University, make serious errors in their attempts to develope the principles of agriculture. It is rather a wonder that they have made so few mistakes. When the farmer appreciates the services of the man of science, as he does those of the carpenter or blacksmith, and demands and offers to remunerate his labors, then we may look for rapid improvement. Agricultural Societies have the power to accomplish what farmers cannot do individually. In Great Britain, the Highland and Agricultural Society, and the Royal Agricultural Society, have long sustained scientific investigations and to no small purpose. We owe to Agricultural Societies much of the valuable influence that Prof. Johnston has exerted through his published lectures.

The New-York State Ag. Society has the honor of calling forth the admirable "Elements" of Prof. Norton, and the present indications are that many associate bodies in this country and in Europe, are rapidly becoming devoted to the establishment of agriculture on a sound basis.

Notwithstanding science has yet done comparatively little for the farmer, it has contributed some principles and practices of very great importance. We can do no more here than briefly indicate some of these.

Chief among them is the discovery of the true nature of vegetable nutrition. The plant increases in size and weight, by taking into its structure certain ingredients of the soil in which its roots are fixed, of the air which bathes its leaves, and of the water that is always present in both air and soil. Chemistry has shown what particular bodies

are requisite to mature the plant, and thus explains the fertility or barrenness of soils, and the use of manures.

The chemist has discovered that a class of plants, as the common grains, require much *phosphoric acid* for their full development; another class—the root crops, need large supplies of *potash*, while the grasses must be furnished with *lime* in quantity. It is easy then, knowing the necessities of the various cultivated plants, to adapt the soil to their most profitable production.

It has long been a mooted point among practical men, at what time grains and grasses should be harvested. Chemical analysis has settled it, by proving that during the ripening of grain, certain changes occur, which render the fully mature seed less nutritious than that gathered while in the milk.

As concerns the preservation of stable manure, science has indicated the wastefulness of the prevailing practices. In whatever part of the country we travel, we see that the majority of good and thriving farmers even expose their stable dung to the full action of the elements, taking no care to shelter it; many of them cart it upon the fields in autumn, to lie the whole winter; and generally it is true, that with no great saving of labor, the value of manure is reduced to one-half or one-third of its original worth. In this country, the *solid* manure of domestic animals is deemed of most value. In other countries, it is the prevailing custom to treasure carefully the *liquid* manure. Ask one of our unreading farmers what the urine of a cow is worth annually, and he has never thought it of any particular importance. A Flemish farmer considers it worth \$10.

Which is the most profitable, to let it go uncared for, or to scrupulously preserve it? Chemistry answers—take care of it, and the reason it offers for this advice is satisfactory. The urine is far richer in the materials which most encourage vegetable growth, than is the solid manure.

The practical uses that science may *this day* serve the farmer, are so great that it were well worth his trouble to become a student, and so far master its principles and applications to husbandry, as to claim without unjust pretension, the rank of a scientific farmer.

If want of early training leaves him with an inaptitude to study that he cannot command energy enough to overcome, let him at least see that his sons be taught the beautiful and beneficent truths revealed by modern science, that affect his calling.

Though so little, comparatively, has yet been accomplished, yet that little is of exceeding value, and it is no hazardous prophecy to predict, that in few years, throughout all enlightened countries, agriculture will be taught as a science, as extensively as it is now practiced as an art.

#### Moss in Grass Lands.

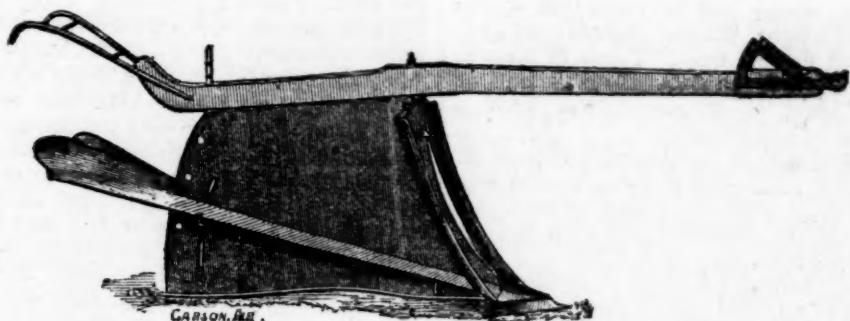
MESSRS. EDITORS—I notice the inquiry by R. F. B. Ellsworth, of Ohio, in regard to grass lands running out, and moss coming in, and rotting out the grass. I have noticed this frequently in years gone-by, in grass lands. In cases of this kind, where the land is in pasture or meadow, and can be tilled to advantage, as soon as the "moss" comes in largely, I would put in the plow, and let the land go through a course of crops of two or three years, as the case may be. After this, seed down again with plenty of good grass

seed, according to the farmer's own judgment. If the pasture or meadow is too rough to plow to good advantage, then I would give the land a good top dressing of compost, if you have it, which is an important consideration; then go over the land with a fine, sharp-toothed harrow. Give it a thorough harrowing each way of the land, or at right angles. After this sow a good supply of grass seed, or the grass seed may be sown previous to the harrowing, as you prefer it. I do not consider this last plan as effectual in restoring the soil to grass, as the former method. But should only resort to it where it was necessary, by a stony or rough soil.

This "moss" in grass lands, I have observed, is of two kinds. One, as is mentioned by your correspondent, grows up thick, and after a while rots away the sod, so that it becomes soft and spongy to the foot. The other kind is a "moss" that grows short and thick to the bottom, with a very soft and velvety touch to the foot. But the sod under it does not rot, but cakes down into a solid body, so that when the plow passes through it, it will often turn up a patch of the sod as large as the top of a two bushel basket. This kind of "moss" roots out the grass as effectually as the other kind. Yet I consider it better for the soil, as it forms a heavy sward, and protects the soil from the atmosphere. Whereas the other kind rots it away, and leaves the soil in a barren state. However, I should prefer to get rid of either kind as soon as it could be made "convenient" after it made its appearance. L. DURAND. Derby, Ct., April 27, 1853.

#### A Proposed Experiment.

There has been no saying oftener repeated, and none more worthy of repetition, so far as farm economy is concerned, than "A place for everything, and everything in its place." One of the best modes for every farmer to apply this rule in practice, is to make a complete list of all his farm implements, from his wagons, carts and plows, down to awls, gimblets, and screw-drivers. Let every implement be immediately returned to its place after using, no matter how inconvenient this may be, instead of throwing it on the ground till forgotten, with the intention of replacing it when a suitable moment occurs to do so. Now, if any one is unprepared to adopt this plan, we would recommend the following experiment, in order to reduce its merits to the test of accurate figuring:—Let him keep an accurate record of all the time lost in one year by hunting for lost tools in times of emergency, adding in the losses occasioned by keeping other persons or teams in waiting, while the search is in progress, also adding the waste occasioned by the consequent exposure of such tools to the weather, or by finally losing them,—and not forgetting to estimate the detriment to his crops and farming operations generally, by the delay thus frequently occasioned. (He may, likewise, if he chooses, keep an account current of the amount of vexation caused by these frequent annoyances—unless he is so far gone that disorder and delay are matters of indifference to him.) We have no doubt that such an experiment as this, faithfully followed out, would greatly surprise him at the end of the year, and furnish satisfactory proof of the immense superiority of the plan first proposed by us. Who will be willing to give *both* ways a full trial?



TIFFANY'S DRAINING PLOW.

#### Ditching Plow.

The above cut represents a ditching plow, invented by Mr. J. C. TIFFANY, of Coxsackie, Greene county, N. Y. It consists of a main standard, to which are attached two movable elevators, with mould-board attachments, and to the point are fastened three knives—the center one attached to the front edge of the standard, to split the dirt, so as to pass freely each side of the standard. The side knives are fastened to two movable lips or arms, which are fastened to the sides of the standard. These knives cut the sides of the ditch. The whole body of dirt being thus loosened, it passes up the elevators, and is thrown off upon the side by the mold-boards, in order to remove the dirt already deposited, provided the depth of ditch is not obtained by the first cut.

The plow is followed by a flexible jointed spreader, made to open and contract, in the shape of a triangular harrow, (Fig. 2.) which removes the dirt from the side of the ditch, and out of the way of the next elevation. By the contraction of the spreader, the deposits are placed evenly upon the top of the ground, and when the ditch is finished, and the tile or other material is laid, the earth can be returned again by reversing the spreader. The sides of the ditch can be cut sloping or straight, and the width of the ditch is regulated by the width of the elevators. The bottom of the plow is made slightly hollow, so as to overcome some of the friction, and make it of lighter draft. The depth can be regulated by the beam, which is made to oscillate upon the front standard passing through it, and is held firm by a pin passing through the beam and hind standard, near the handles of the plow. Thus the trouble of shifting the clevis is in a great measure removed. Application has been made for a patent, and a brass model will be on exhibition at the Crystal Palace in New-York.

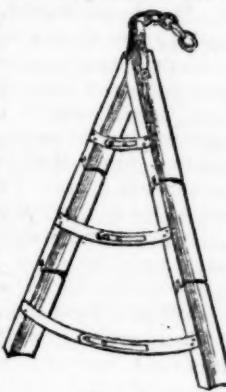


Fig. 2.

#### Culture and Value of the Parsnip.

MESSRS. EDITORS—As one who has lived twenty years upon a farm, searching all the while for reliable information, both from his own experience and from that of others, ought to be in possession of some "fixed facts" and settled opinions; and as duty, propriety, and fraternity require that we should allow others the opportunity of benefiting by our experience, I feel moved to give you a few items of information which I think very satisfactorily settled by evidence within my own observation.

Disliking long prefaces, and trusting that all your correspondents will dispense with them, I commence the brief summary of my experience and observations of twenty years, by a statement in regard to the value of parsnips.

PARSNEPS FOR HOGS.—One of the things which I consider well settled, and a reliable and useful item of knowledge, is this: that parsnips, either raw or cooked, but preferably cooked, with the addition of apples, potatoes, &c., occasionally, were it only to prevent the appetite from being cloyed by "eternal sameness," constitute the best kind of food whereon to fatten a hog. They are also the best kind of roots for milch cows. Both hogs and cows eat them with avidity, and to the milk and butter they communicate a good, a delicious flavor. I have seen it stated some years ago, that beef made from parsnips brings the highest price in the London market. I think, though I may be deceived by imagination, that pork made from feed chiefly composed of parsnips, is sweeter than when made from anything else.

This is not the only recommendation which may be justly bestowed on the parsnip. Among its other good qualities is this—that it requires no care or housing in the fall, as all other roots do. In all the middle, northern, and western states, potatoes, carrots, and turnips must be harvested and housed, or buried; and even when all this is done, and with good care and judgment too, a portion will frequently be ruined and lost by frost, overheating, or decay from other causes. Parsnips, on the other hand, require no care in the fall, as they may be left without injury in the ground all winter. They may also be planted earlier in the spring, as the frost does not injure them, even at the earliest stage of their growth, so that this root crop interferes the least of any with employments which crowd upon the farmer in the spring and fall. It continues to grow through the whole season, until the ground freezes in winter; it requires no expenditure to gather or store it, it may be taken up on several occa-

sions during the winter, and the roots that stay in the ground *all* winter, are not injured, and probably improved, by the frost. Parsneps seem to be eaten with more relish than either turneps or potatoes, and yield, in the raw state at least, a greater amount of nutriment.

Another advantage in cultivating parsneps is, that on a suitable soil—sand or loam, rich or well manured, and deep plowed—a large growth may be secured. At the rate of 1,200 bushels have been gathered from an acre of ground.

Parsneps may be planted either in spring, or in the latter part of summer, say in August or September. The ground should be well manured, mellow, and deeply plowed, and the seed sown in drills, so as to have plants to thin out, while preserving them at about eight inches apart. This will probably require at about the rate of two pounds seed to the acre. The drills should be two feet apart, and the space between well cultivated and kept clear of weeds. If sown in the spring, the earlier the better. A larger growth may be secured, however, by sowing the seed in September. There will be some considerable growth before the ground freezes up, and the growth will commence again as soon as the frost leaves the ground in the spring, which will continue throughout the whole season, without running to seed. They will thus have a growing season of about twelve months; whereas, when sown in the spring, they can grow only eight or nine months.

All the advantages of this root crop have not yet been named. Among them are these—that they seem uninjured by either a wet or dry season, and that no insect nor bug attacks them at any stage of their growth. *OBSERVER.*

#### Use of Tan-bark for Manure.

MESSRS. EDITORS—I believe I promised sometime since, to give some account of Helderbergh Farming. I proceed now to fulfil that promise, although what I shall say will relate chiefly to myself, reserving for some future letter, perhaps, further remarks in relation to farming, as practiced by our hardy agriculturists.

You inquired of me in relation to my manner of applying spent tan-bark as a manure. I answer, I have been in the habit of using it more or less for several years. Having to haul it about one mile up-hill, I have never been able with my limited means, to apply more than about one hundred loads in one year. This is used up in various ways. The application of it to land in a raw state, unless it be spread and dried before it is plowed in, I conceive to be injurious, although I have never tried the experiment; consequently I first to begin in the summer, fill in one or two loads into my yard for fattening pork, say latter part of August; when that is thoroughly used up, I fill in again, making my yard tight so as to retain all of the urine. From that time until the winter sets in, I endeavor to keep the hogs dry by filling up the yard with tan-bark. While loading it one day, very busily, a lad of some ten or twelve years old, annoyed me exceedingly by inquiring what I did with so much of that bark; I replied, “I fat my hogs *on it*,” which gave me rather a bad name—one man declaring he would not work for me, if I fattened my hogs on tan-bark. I let these yards remain until spring, when I cart out the manure thus made on my corn ground. It has all

the effect of pure hog manure, which is said to be the best manure we can get for that crop, and produces pumpkins in a wonderful manner.

My next method of using in the manufacture of manure is, in my stables, especially my horse stable. To a span of horses I put in one load as bedding, eight or ten inches deep over the entire floor. This is, or ought to be, forked over every day for ten or twelve days; it will then do to cart out in large heaps, say three or four cart loads to the heap, and then a fresh load in the stable. This method is pursued until the hard, frosty weather prevents its use as bedding, after which I substitute straw until the warm weather in the spring. I have now a heap of some four or six loads which I have made in this way from my horses, since about the middle of March. Not feeding my horses hay, makes it entirely free from seeds; this I always apply to my carrot ground or garden. Enough should be kept under the horses to absorb the urine, and when it becomes completely saturated it should be taken out and fresh put in. The urine has the effect to turn it black, and will rot it very quick. A pile of thirteen loads which I made last year could not be distinguished from clear muck when carted out for wheat in September.

In using the bark for stabling my cattle, I will say that I have no cellar under my barn; in the absence of that convenience, I do as I conceive the next best thing—I cover my stable over some six inches with the bark, (and it makes a nice clean, soft bed for them;) the stable is cleared every morning of all that gets wet, and the remainder is leveled off until the whole is shovelled out; then again fresh is put in, and so on until frosty nights prevent its use. Straw is then added until the warm weather in the spring, when the use of bark is again resumed. In the course of the winter a large pile, say ten loads, is drawn near this deposit, and as soon as we are done stabling in the spring, the whole mass is forked over, and the ten loads in its own state, mixed with it—a layer of bark, and then manure, and so on until all is worked over. This remains until September, when it is carted out for a wheat crop. I also fill up my cattle yard occasionally in the fall and during the winter, especially in thawy weather; my aim is to keep my cattle yard dry; and occasionally during the summer I spread on a few loads, sufficient to keep my cows that I yard nights, dry and clean.

These are the only methods which I have used thus far to manufacture this article into manure. I have on hand at present some few heaps, drawn directly on the field where I intend to apply it, which I intend to fork over and mix with lime or ashes, and let it decompose in that way until it is fit for use. This is my first experiment in this direction. I have in one or two instances drawn out my yard manure in autumn, into heaps of three loads, and then covered these heaps with about half a load of bark, which I think has done quite well. Thus far my experiments in the manufacture of manure from spent tan-bark, and now for the result. This I must reserve for another letter, or perhaps let it remain till you come out here, about the first of July, when I will tell you all about it. Note we expect you here about that time.

Should you think this communication of any value to the agricultural interests of the country, and conclude to publish it, (which I hardly think is best,) I wish you would insert it in the *Cultiva-*

tor, as I am frequently asked by our friends here, such questions as are answered in the above hasty communication. Very respectfully yours. GEO. W. DURANT. *Rensselaerville, May 9, 1853.*

#### Rust in Wheat Prevented by Draining.

L. TUCKER—Under this head, in your eighteenth number, are some suggestions from a farmer in the western part of this state.

Observation and experience have convinced me that *too much moisture* in the soil is the cause of wheat being thrown out by frost, and that *thorough under draining* is the only remedy.

Every observing farmer knows that too much moisture is one *great* cause, if not the *only* cause of rust in wheat; consequently the drier the soil is, the less liable the wheat is to be injured by rust. Thorough underdraining is the remedy.

The writer says: "when I moved to this country, I had no idea that our land would ever need draining, but this was when the ground was full of roots. Since these rotted out, there has been a settling down of the soil, &c. \* \* \* I only know that I have fields which I would not now think of sowing with wheat, but to which purpose I should have made no objection ten years ago."

Is not this the experience of every farmer living *south of the lime ridge or ledge* in all the wheat growing sections of this state? While *north of that ridge*, no such results are experienced.

This is my experience, having formerly owned a farm south of the ridge, on which wet places each succeeding year were found, and though under draining was extensively used, and with good effects, still these wet places each year called for an additional drain. Becoming tired of this, I sold that and bought a farm *north* of the lime ridge, and am exempt from the former difficulty.

Lands north of the ridge, which are *naturally* wet, should be drained, but those which were dry *before* cultivation, remain so *after* it. This is my observation and experience. Does the observation and experience of others corroborate it? M. Fairmount, N. Y., April 7, 1853.

#### Clearing New Land.

LEWIS SANDERS, a veteran agriculturist of Kentucky, recommends girdling forests, as far preferable to cutting the trees in a green state. He says:

Having possession of a body of unimproved land, and with crippled and restricted means, the first great question to be settled under the circumstances, was the best method to bring the land into a productive state. Grass was determined on as the ultimate object. To prepare the land to yield something in the shortest time, and with the least outlay of money, was the course to be pursued. The first step was to deaden—girdle a few hundred acres—reserving useful timber only. This is an important operation on all clay soils, and in many places not sufficiently appreciated. By girdling a most beneficial process takes place in the soil, which is loosened and enlivened—yielding kindly to the plow, and being much more productive than lands from which the timber has been cut green and removed off. I know this fact from actual experience; the *rationale* may be discussed by others. The roots of the stump of a green tree will resist the operation of

a plow, one, if not two or three years longer than the roots of a tree of the same growth, girdled and left standing.

Deaden your land, by girdling the useless timber, as soon as convenient after the sap is in full flow; this work to be finished by the 10th of August. At the end of four or five years it is easily cleaned up and made ready for the plow. Fire, judiciously applied at times, materially aids in the cleaning up. The roots being sufficiently out of the way to permit deep plowing, (the only sure method to save the soil,) two or three crops of corn may then be taken off. The cultivation of these two or three crops mixes the surface with the subsoil, leaving the ground in a better condition for the reception of grass seed than a virgin soil.

#### The Red Cedar for Farm Fences.

J. HILDRETH, in the *Rural New-Yorker*, recommends the Red Cedar for farm hedges. He says:

"The scarcity of timber makes us begin to think that some substitute must be used for fencing, and one inquiry is: What kind of tree will make the best hedge when planted for that purpose? The merits of the different varieties used, thus far, have been fully discussed, but I have never heard of the Red Cedar tree being spoken of as suitable for a farm fence, yet I believe that this, after all, is the variety of tree which will yet be used for such purposes more than any other, and does in reality possess more good qualities to recommend it for such purpose for our climate.

"The different good qualities are: It bears pruning to any extent, and at any season, and is improved thereby. It is subject to no diseases; it grows equally well in poor, thin soil, as in rich; it is not affected by long drouth or the coldest weather. Grain or other plants will grow even among the branches, so that no barren land is caused by the growth of its roots. It will be a protection from the sweeping winds that blow across our country in winter. It will form an agreeable shade for all domestic animals, and by a general adoption of this tree for fence, our whole country will be made beautiful by the cheerful appearance of these evergreens.

"I would be glad to awaken all readers of the *Rural* to this subject, for none, certainly, is more worthy of their attention. I have hundreds of these trees under my observation; some standing singly, some in groups, and others in lines; and none can be more ornamental."

#### List of States Fairs for 1853.

Vermont, . . . . .	Montpelier, . . . . .	Sept'ber, 13, 14, 15.
Kentucky, . . . . .	Lexington, . . . . .	" 13, 14, 15, 16, 17
New-York, . . . . .	Saratoga, . . . . .	" 20, 21, 22, 23.
Ohio, . . . . .	Dayton, . . . . .	" 20, 21, 22, 23.
Pennsylvania, . . . . .	Pittsburgh, . . . . .	" 27, 28, 29, 30.
Michigan, . . . . .	Detroit, . . . . .	" 28, 29, 30.
Wisconsin, . . . . .	Watertown, . . . . .	October, 4, 5, 6, 7.

MILK AND CREAM.—It is asserted that milk always throws up a smaller proportion of the cream it contains, when of some depth in the vessel, than when shallow; and that more cream rises by diluting the milk with water, and rendering it less tenacious, although the quality of the butter is injured by this treatment.

## Answers to Inquiries.

**CEMENT PIPES.**—I observe an inquiry relative to the use of hydraulic cement, or water lime, for water pipes. Having tried various experiments with this article, in view of laying an aqueduct, I came to the conclusion that it would answer no purpose at all, and was glad to sell off my remaining stock of cement, and purchase lead pipe. The recommendations in the *Agricultural Report* of the Patent Office, of this article, apply only to continually descending grades, as it will submit to no pressure without leaking, for the reason that the lower strata of the pipe, sets in a measure, before a thorough combination of the top strata can be effected, however expeditiously the work may be done. If your correspondent is prejudiced against the use of lead, I would recommend Ball's water pipes, as being cheap and durable. These are made of tubes of sheet iron, coated on the inside with this cement, and when laid down, are also laid in cement. Gutta percha makes very good pipe, but is much dearer, costing \$1.50 per rod for half inch.

Speaking of the deleterious effects of using lead for the conveyance of water for culinary purposes, I will say, that where the water is kept continually running, the amount of lead dissolved in the small proportion of water used, would scarcely be perceptible. My aqueduct of 40 rods, with 400 pounds of three-eighth inch pipe, discharges twenty-five barrels per diem, or about three tons of water, making over 1,000 tons per annum, or 25,000 tons in twenty-five years. Allowing the whole amount of pipe to dissolve in that time, which is not at all probable, then you would have 400 pounds of lead dissolved in 25,000 tons of water. We leave it for medical men to say how injurious this solution might be. But it is evident that solution ceases when an incrystation of the oxide is formed on the inner surface of the pipe. Lead will be superseded by glass at no distant day. It is a wonder that some enterprising Yankee who desires a fortune, has not started the business of manufacturing glass water pipes in this country. Junk bottles are blown for three or four cents, with an amount of material sufficient for five or six feet of water pipe. **HONESTUS STEARNS.** *Felchville, Vt., April 20, 1853.*

**WHITE AND YELLOW CORN.**—With regard to the inquiry about the mixing of white and yellow corn, I would say, in the first place, that the mode of mixing is by the flower from the tassel, falling or blowing upon the silk of the corn. Every kernel has a silk, and the neighboring tassel sends its flower by wind or insect upon the silk of another, thereby deciding the complexion and nature of the corn. The reason why the yellow will not mix with the white corn, is because the white corn generally blossoms about two weeks before the yellow corn does; therefore, there is no silk on the yellow corn for the blossoms of the white to fall upon. **R. R. Fulton.** *April 8, 1853.*

I have known white corn to mix with yellow, when planted at the distance of one-fourth of a mile, as well as "adjacently." **B. Dublin, N. H., April, 1853.**

**SULPHATE OF AMMONIA.**—Will you please to inform me whether the Sulphate of Ammonia should be applied to the *earth*, around peas, strawberries, &c., or should it be applied to the *foliage*? **A FARMER'S DAUGHTER.** *Hockaman, Ct., April 20, 1853.*

The sulphate of Ammonia should be prepared by dissolving half an ounce in a gallon of water, and may be applied to plants in moderate quantities every *sixth* day. It may be used in an ordinary watering pot, and applied to both the foliage and the earth.

**BONE MILLS AND BONEDUST.**—Where can I purchase the best machine for grinding or crushing bones, and what is the price of bone dust in Albany? **W. S. H.**

We have inquired for bone mills at the Albany Ag Warehouse; but Mr. Emery informs us that they have never kept them, and he does not know where they can be had, or which is the best if there is more than one kind.

Our correspondent could probably procure one, by addressing **R. L. ALLEN**, New-York, who we think has advertised them for sale at his Warehouse. The price of bone dust is about two cents per lb.

**NOVA SCOTIA AND WESTERN PLASTER.**—**A. F. S.** inquires in the last number of the *Country Gentleman*, "the difference between Nova Scotia and Western plaster."

In 1849, I analyzed samples from Nova Scotia, and also from Springport, Cayuga co., N. Y. That from Nova Scotia was white, but not crystallized in the stone. It was nearly pure *sulphate of lime*, containing in different samples, from 33.5 to 34.1 per cent of lime—44.5 to 47. of sulphuric acid—18.9 to 20.4 of water, with very slight traces of iron and alumina.

That from Springport, varied in different samples. I examined different specimens of stone as they were sent to be ground, and also the ground plaster, as it was furnished in market. They contained from 34 to 37 per cent of lime—30.5 to 42.1 of sulphuric acid—2.9 to 4.4 of oxide of iron and alumina—3.7 to 6.5 of silicea—4.8 to 5.2 of magnesia, and 13.6 to 21.5 of water. There was, also, a little bitumen or other similar organic matter, which gave it a bluish color. Some specimens contained *carbonate of lime*, which would somewhat diminish their value.

We see by this, that the Nova Scotia gypsum is the purest, but the impurities of the other are not in sufficient quantity to materially injure their value. That of Cayuga Lake, (Springport) is said to contain free sulphur, which would increase the value.

I have seen no account of experiments, to accurately test their comparative values, but have heard farmers say, who have used both, that there was little or no difference in their effects, although each is preferred by some persons, without, perhaps, any very definite reason for the choice. **Wm. H. BREWER.** *Ovid, N. Y.,*

**TAXIDERMY.**—In reply to your correspondent from Salisbury, I will give one way, the best of which I have any knowledge, for preparing birds for a cabinet. The requisite materials are a sharp knife, some annealed wire of a size suitable to support the bird to be set up, a dish of Indian meal or fine sawdust, for rubbing the hands dry occasionally, so as not to grease the feathers, and some arsenic wet into a paste with alcohol.

Birds in this latitude have their best plumage in May, June and July. The bird should be taken in hand before it has been dead long, or the skin will be tender. If the feathers have been ruffled in the pocket or hunting-bag, it is almost impossible to re-arrange them so that they will look natural.

In skinning, begin at the point of the breast bone, part the feathers, and run the knife back, cutting only the skin, until you have gone so far that by cutting off the extremity of the bird, there will be enough flesh to retain the tail feathers. Strip the skin up to the wings, and take the wings and legs off, at the joints nearest the body. Strip down the skin of the upper joint of the legs and wings, and take off the flesh. Strip the skin up to the head, and take off the head with the skull in it. Take as much of the brain out as you can with a crooked wire or other suitable instrument. Put the arsenic paste into the skull, wings, legs, upon the flesh holding the tail feathers, and rub it over the flesh side of the skin generally. If you are collecting for some one else, the skin is now ready to be laid away, or packed and sent to a distance, after putting in a little cotton to keep it in shape.

If you wish to set it up immediately, sharpen two pieces of wire, and run them down the whole length of the legs, following them with the thumb on the outside, so that they may not pierce the skin. The same course to be pursued with the wings, only the wires need run but half the length, unless you wish the wings extended. Another wire should be inserted in the skull, and another in the tail, and a block should be whittled out something the shape of the body of the bird, into which the wires of the skull, wings, legs and tail should be

fixed. The skin can then be gradually sewed up, filling in about the block with cotton. The use of a block is, I think, better than running one wire from skull to tail, and fastening the wing and leg wires to it. The proper position, which is obtained only by studying the habits of the bird, can be given by bending the wires. The birds in the cabinet of Amherst College were prepared in this way. W. M. H. Greenwich, N. Y.

MORGAN HORSES.—I wish, with many of my neighbors, to ascertain through the columns of the Cultivator, whether the old Black Hawk horse, owned by DAVID HILL, of Addison county, Vt., is a Morgan or not; and, if you please, give his pedigree. The reason for this is, the Cultivator is considered good authority among us, and we wish to be set right in this matter. There is one of his colts in this county, brought from Vermont last fall. J. A. MARSHALL. Adrian, Mich., 1853.

The Black Hawk horse above referred to, is a genuine Morgan. He was sired by "Sherman Morgan," who was got by the old "Justin Morgan," the father of the race of Morgans.

GUANO—C. M. C.—Guano can be procured at any of the agricultural warehouses in New-York, at two to three cents per pound, according to quality and quantity.

CROWS AND CORN.—"Will you please inform a young farmer, of the most effectual mode of preventing crows from pulling young corn? They have proved very destructive to my crops formerly." F. R. G.

The destruction of corn crops in this way often proves a serious evil, for re-planting makes but an uneven crop at best, and often a half-ripened one. As it is better to have fifty bushels of good and well matured corn, than twenty-five soft and poor, it is worth some trouble to repel the crows. This may be easily effected before planting, by first pouring hot water on a half bushel of the seed, and then a pint of tar, stirring it quickly. Every grain will become coated with a delicate varnish of tar, and if then rolled in air-slacked lime before planting, no crow will touch it. But, should this remedy come too late in the season, another equally efficacious may be used, and this is the common one of *stringing* the field. No crow will enter an angle formed by two suspended strings stretched on poles. A curious illustration occurred some years ago, on a long strip of *sowed corn* (for fodder) which was protected by a zig-zag string running from one end to the other. Within the angles formed by the string, not a blade was touched; but close without them, at each end, the whole crop was demolished. A crow is a remarkably wise fool, and this is a complete mode of circumventing him.

HEN MANURE.—E. B. This manure, like guano, is too strong to be applied without admixture with other matter. Made into compost with equal parts of charcoal dust, pulverised or charred peat, or mould, it may be used for all crops, and it is said to be particularly valuable for fruit trees, and as a top-dressing for grass lands or grain crops. If used for garden purposes, it should be thoroughly mixed with the soil.

AG. PAPERS.—S. C. P. will answer your inquiry.

ORANGE TREES.—I would like to know through your paper, the season for grafting the Orange tree, and also the soil best adapted to its growth, or any other information in relation to it, would very much oblige me, and perhaps some others. H. L. WARD. Middleville, N. Y.

The best time for grafting the Orange is the spring, just before the buds begin to shoot, or it may be performed as soon as the wood is sufficiently ripened in the fall. The soil best adapted for the culture is good meadow loam and decomposed manure, well incorporated.

LOTAN SMITH, Esq., President of the Sullivan county Ag. Society, desires us to give notice that he has removed from his former residence, and that his address is "Bavayville, Sullivan county, N. Y."

#### Information Wanted.

TIME TO SOW PLASTER.—In this neighborhood, there are different opinions as to the proper or best time to sow plaster. (The soil, gravel, clay and loam—mine is principally light gravel.) On meadows and pastures, the majority say as soon as the frost is out in the spring—a few say the grass and clover should be up and look green—the most say it is no benefit to wheat in this vicinity, and there is considerable wheat raised within twenty miles of this place. Now if any of your readers can give us any information, in regard to the best time of sowing plaster on meadows or pastures, and whether it is generally a benefit to wheat, they will do us a favor. THOMAS A. BEMUS. North East, Erie Co., Pa., April 7, 1853.

RAISING COLTS BY HAND.—I wish to know through the readers of the Cultivator, if Colts cannot be raised by hand, the same as calves—that is, not let them run with the mare, but shut them up, and feed them with cow's milk. YOUNG FARMER. Oswego, N. Y.

Reading about the cultivation of Onions in one of the back vols. of the Cultivator, it was stated that the seed was sown with great regularity and despatch, by a machine. I would like to find such a one, not costing too much. I bought one in New-York, last winter, made by Ruggles, Nourse & Mason, cost \$3, and instead of increasing my crop to that amount as I hoped it would, it lessened it very much, by the irregular distribution of the seed.

Which do you think will be the cheapest manure for me to buy, to put on oat ground this fall for wheat; 100 bushels of ashes, cost \$15, or 200 pounds of superphosphate of lime, \$6? May not this latter article be prepared cheaper at home, according to the directions of the late Prof. Norton?

Which is the most profitable root to raise for feeding to stock, the Belgian carrot or the French sugar-beet? How long will the seed of the yellow locust keep good? A CONSTANT READER. Orient, N. Y.

Can you, or any of your correspondents, inform me through the Country Gentlemen, why the grass in our pastures, of five years standing and upwards, has, as the transmutationists would say, "turned to moss," as that seems to have taken the place of grass to a great extent, within a few years, in many of them, without respect to soil, condition, or situation. In places where there was good grass a year or two ago, the sod seems to have rotted, and is now covered with moss.

If you can give the cause and cure, you will oblige your friend, and perhaps others. R. F. B. Ellsworth, Mahoning Co., Ohio.

AN AGRICULTURAL COLLEGE AT LAST.—The friends of agricultural education throughout the country will be pleased to learn that the bill incorporating the New York State Agricultural College, has passed both branches of the Legislature, and will be put in operation at an early day. The trustees of the College are John Delafield, of Seneca; Henry Wager, of Oneida; William Kelly, of Dutchess; John A. King, of Queens; N. B. Kidder, of Ontario; Joel W. Bacon, of Seneca; William Buel, of Monroe; Tallmadge Delafield and Robert J. Swan, of Geneva; and such others as may be associated with them. Most of these gentlemen are well known to the farming community, as among the most able and zealous advocates of agricultural improvement, and will, without doubt, procure a board of instruction, who will carry out the long cherished idea of thorough, practical and scientific agricultural education. By the act of incorporation, the farm and grounds are to consist of not less than three hundred acres.

We reserve for a future time, a more extended notice of the details of instruction and organization. The features are essentially the same as those embodied in the articles on "An Agricultural College," which appeared in the early numbers of this journal. We wish the institution prosperity, usefulness and a long life.

## The Dairy.

### Milk and Butter.

In compliance with the suggestions of several of our subscribers, we propose hereafter to devote a page or two a month, to this important branch of domestic economy; and we solicit communications for this department from all those engaged in the dairy business. In the mean time, we believe we cannot render our dairymen and women a better service than to copy the annexed article on Milk and Butter; recently written by Dr. LYON PLAYFAIR, well-known as one of the most thorough and practical scientific men of the age, for the "Cyclopedia of Agriculture," a work of rare merit, now in course of publication in London:

The preparation of butter from milk has been much studied by scientific men, and the results of their researches are of practical interest. Milk contains 87 per cent of water, in which are dissolved caseine, sugar of milk, and certain inorganic salts; in this solution is suspended, in the form of an emulsion, about 4 per cent of butter. The suspended butter is in the form of little globules, which seem to be surrounded with a little shell or skin, supposed to consist of coagulated caseine. The theory of the formation of butter is very simple; the little globules are broken by agitation, and the butter coheres together in a mass; but it is well known that, in the practical carrying out of this process, considerable difficulties arise, which modify the results of the process. The variations in the result depend, upon chemical transformations suffered by the other constituents of the milk during the process, and these changes must be fully understood before the dairy farmer can have an intelligent knowledge of the important and delicate operations entrusted to him. The first point to be considered is the changes which milk experiences by exposure to the air at different temperatures.

Caseine, or the cheesy part of milk, being a soluble nitrogenous body, is apt to run into putrefaction. All nitrogenous substances have this tendency in a greater or less degree, and rapidly suffer the change when under the influence of other bodies in the act of decay. For example, if a fresh piece of flesh be placed in a perfectly new vessel, which has never contained flesh previously, it will often keep for weeks in hot weather, if there be no decaying emanations in the air; but a piece of the same flesh kept in a vessel which has contained bad meat, will in a few days enter into a putrid state. The exciting cause of change may be almost infinitely small, but it still acts just as yeast does on sugar, and produces effects on the whole mass: this kind of chemical action frequently occurs in the dairy. Any decaying emanation, which may either proceed from a drop of spilled milk, or from some external source, communicates to fresh milk a tendency to pass into the same state, and when the condition of change has once begun, it is extremely difficult to arrest its progress. The effects may not at first be perceived; butter may be made from milk with this putrefactive taint in all apparent goodness, but it soon acquires a bitter taste, and loses its original quality. The first practical lesson then to be attended to in the dairy, is the preservation of absolute cleanliness. The vessels containing the milk must not be porous, even the walls and shelves should be non-absorbent; cleanliness even to affectation should be insisted upon. The dairy should be away from the farm yard, distant from open drains or sewers, and should be cleansed with water quite free from organic matter. When milk is spilled it should be immediately removed, and the place on which it fell should be washed with fresh portions of spring water. The neglect of these seemingly excessive precautions, is the principal reason of the inferiority of the butter of many districts. There are, however, two kinds of change to which milk is lia-

ble, either under the influence of decaying matter or by being kept for some time. One of them is known as putrefaction, the other as decay. Putridity in milk ensues when the caseine enters into the state of change to which all nitrogenous bodies are subject in limited access of air. As the result of this transformation, ammonia, butyric, capric, caproic, and caprylic acids, and various badly smelling gasses are produced. This state often results in winter, when a diminished temperature prevents the coagulation of the caseine by the lactic acid, and the consequent removal of the former from the immediate action of the air.

In summer the temperature induces the speedy formation of an acid, which, uniting with the alkali that holds the caseine in solution, precipitates it in an insoluble state, and therefore withdraws it from the influence of the air. The primary action, both in this state of decay and putrefaction, is in the absorption of oxygen by the caseine, which, being once put into action, is sufficient not only to continue a state of change in itself, but also to effect transformations in the other ingredients of milk. When the caseine has been rendered insoluble by the acid formed in the way described, it enters with difficulty into the former state of putrefaction, and is therefore less liable to act upon the butter with which it may be mixed. These general remarks will suffice to explain the precautions used in preserving milk for the purpose of making butter.

The theory of making butter, either from cream or from milk is the same, with only slight differences due to their state. Cream consists of the oily globules which, from their lightness, have risen to the surface, but still covered to a great extent with their cheesy skins, and still swimming in a solution of sugar of milk. It is the presence of these ingredients that enables cream to become sour. The explanation of churning is, therefore the same, whether cream or milk is used, the only difference being in the labor required to effect the separation of the butter. During the process of churning, the skins of caseine surrounding the globules of butter, are broken by the mechanical agitation, and the butter itself being brought into contact, coheres together into a mass. The air introduced during this operation, exerts a primary action on the caseine, causing it to form lactic acid from the sugar of the milk, and as a result of these affinities, the temperature rises several degrees. The acid thus formed, aided by the increased temperature, produces a coagulation of the caseine, and thus renders easier the coherance of the butter, by aiding in the withdrawal of the covering of the globules, and by altering the character of the liquid which had suspended them in the form of an emulsion. The fatty matter thus obtained, (butter) is not pure, but still contains foreign matter, especially caseine, which is the ingredient that produces its rancidity. Pure butter from the cow was found by Bromeis to consist of:

Margarine,.....	68
Oleine,.....	30
Butyric, capric and caprylic acids, with glycerin, .....	2
	100

But ordinary butter, besides varying in the proportion of margarine and oleine, according to the nature of the food, and the period of the year, always contains in addition to these ingredients, cheese, water, and sugar of milk, together amounting to from 10 to 16 per cent. It is very difficult to get rid of all the cheesy matter, as it is now in an insoluble state, but it may be removed to a very great extent, by washing the butter in repeated portions of water, and decanting off the particles of caseine which suspend themselves in it. In the best kinds of butter, the cheesy matter rarely amounts to more than 1 per cent; in the inferior varieties there is often several per cent present. As a general rule, the more caseine that is left in butter, the more is it apt to become rancid. To render this intelligible, attention must be given to the normal ingredients of pure butter. Margarine and oleine consists of margaric and oleic acids, united to an organic base called oxide of lipyle. Margaric acid consists of 34 equivalents of carbon, 33 equi-

valents of hydrogen, and 3 equivalents of oxygen; while oleic acid is constituted of 36 equivalents of carbon, 33 equivalents of hydrogen, and 3 equivalents of oxygen. Now it is known that the latter acid absorbs oxygen from the air with great avidity, producing peculiar compounds, among which, however, margaric acid has not yet been recognised. Still the abstraction of 2 equivalents of carbon, in the form of carbonic acid would be sufficient for its conversion, and this formation is so simple and common an occurrence in the organism of animals, that oleic acid may be transformed into margaric acid during the formation of the milk, thus producing more of the solid fat at one time than at another, and causing the variations in the firmness of the butter made from it. It is, however, quite gratuitous to suppose, with some authors, that this transformation takes place during the churning. When oleic acid absorbs oxygen from the air, it acquires a very rancid smell, which is one of the causes of rancidity in butter. But the main cause is the production of butyric, capric, caproic, and caprylic acids. These acids are probably not present in any quantity, in perfectly fresh butter, but they are quickly formed by the cheese left in it operating on the sugar of milk. Butyric acid has an odor of human excrements; caproic acid of sweat; capric acid has a rank smell, resembling that of a goat, while caprylic acid is the only one which is not obnoxious to the senses. These acids are volatile and soluble in water, and as rancidity of butter depends in a great degree, upon their being present in appreciable quantity, a knowledge of this fact may be employed in depriving butter of its rancidity. For this purpose it should be melted in twice its weight of boiling water, and well shaken with it. By this means, the acids are dissolved, and partly volatilised, the rancidity being thus removed. At all times butter may be purified by repeated melting with fresh portions of water, the pure oil rising to the surface, and leaving the impurities in the water. The butter loses its consistence by this operation, but that may be restored to it, at least to a great extent, by pouring it when melted, into a large quantity of ice-cold water. As the formation of the badly smelling volatile acids depends upon the presence of caseine, this mode of purification removes the injurious ingredient. At the same time the butter becomes less pleasant to the taste, the water having taken up the small quantity of foreign substances which give to fresh butter its agreeable fragrance and taste. These, some chemists are inclined to believe, are the caprine, caproine, and capryline, but the properties of the two former bodies do not countenance this supposition. Some of the compounds of caprylic acid have a fragrant odor like that of the pine apple, but the smell of capryline itself is little known.

It is scarcely necessary to offer any explanations of the manner in which salting butter aids in its preservation.

A *saturated* solution of salt is found incapable of permeating many animal substances—such as cheese, and is found to draw water from them, so as to actually dry them, although surrounded by a liquid. Organic matter thus dried cannot pass into putrefaction, and the caseine in this condition cannot exert those changes which are necessary to the transformation of the other ingredients of the butter. Salted butter should, however, be packed tightly in jars; not only to preserve it from the access of oxygen, but to prevent the solution of salt gratifying its affinity for moisture, by withdrawing it from the air, instead of from the caseine. Fresh butter, when laid in a syrup of sugar, keeps even better than salted butter. The practical application of all the explanations of the making of butter resolve themselves into the advice of keeping an absolute purity in the dairy, and the removal of all caseous particles from the butter when made.

#### Cheese Making.

We make the following extract from the Report of the Committee on Cheese Dairies, at the last exhibition of the Herkimer County Ag. Society:

"The great desideratum in cheese making is to form

it as near a solid as possible, and still retain moisture enough to produce a buttery texture in the cheese. The more compact the cheese is welded together and destitute of holes, or pores within, the less salt is required to preserve it from tainting. Salt is used as a controlling agent, to suppress the fermentation and decomposition, introduced and carried on by the combined action of heat and rennet. Hence the necessity of the two latter agents being allowed to finish their work and expel all the fluidical properties of the milk before the curd is cooled, or salt added, as either are antagonistic to the agents first used, and if added too soon, rennet will be held in solution with whey in the curd and will not press out, and will cause a rapid fermentation in the cheese when exposed to summer heat, unless salt enough is added to suppress it; the whey will then be held in the cheese and will sour and prevent the curd from yielding, and prove to be a bad cheese for any market.

The committee feel warranted by their own practical experience, and their observations in examining Diaries this season, in urging upon the Dairymen of Herkimer Co., a studious observance of the following, as cardinal points in successful dairying, viz: Good condition and perfect health of cows at all seasons of the year. A uniform and plentiful supply of nutritious food for them, with perfect quiet; plenty of good water, requiring but little exercise to obtain a frequent supply; warm and dry stabling in winter, with quiet and careful handling; thorough and quiet milking at particular hours by the same hand; uniformity of good health in all the herd of cows, that the milk of all may be as near as possible of a sameness, as the strength of coherence in all solids depends upon strict affinity in their constituency; a uniform application of all the agents to the whole mass, in heating, cooling, working, salting, &c., making all the changes from cold to warm and from warm to cold, slow and uniform through every part and particle of the whole, that the affinity here spoken of may be preserved through the whole and to the last, and a more perfect solid may be the result of the practice. No rennets should be used except from calves in perfect health, as one unhealthy stomach might cause much trouble to the cheese maker, and misdirect the search for its origin.

And last yet not least, after all has been well done, no reliance can be placed upon the result of a season's operation, without curing rooms, so constructed as to adapt the temperature to the constitution of the cheese, and protect them from the influences of the sudden and extreme changes that our climate is subject to.

Nature has established the fact, that no county in the State has facilities for making better milk than Herkimer; but it is to be feared that the old traditional habit (too much adhered to,) of letting cheese cure themselves in some place least needed for other purposes, will be the means of her being rivalled in her merited reputation for fine cheese."

**A WORD TO MEN OF WEALTH**—I mean those that feel as though they could spare a few dollars for a good cause—that is for the advancement of the science of Agriculture, or the means of diffusing the knowledge already attained among the farming community more generally. My plan is, for such men as have a desire for the advancement of the science of agriculture, to order such works as "*THE CULTIVATOR*," or "*THE HORTICULTURIST*," to be sent to some young men of their acquaintance, who follow farming, or contemplate doing so, for a business. Not that I think that the consideration of the cost of such works, prevents them from reading them. The reason is, that they are not aware of the existence of such works, or the value thereof to the agriculturist. V. S. *Buffalo, N. Y.*

**A GOOD FEEDER**.—Mr. ISAAC LANDIS, a Lancaster (Pa.) farmer, recently sold forty head of fat cattle to a Philadelphia butcher, at \$115 per head, amounting in all to \$4,600.

☞ Catalogues of Short Horn and Devon Cattle, offered for sale or to let, by L. G. MORRIS, Esq., of Mount Fordham, can be had at this office.

## Horticultural Department.

### Shaping Trees and Shrubs.

Who has not observed the great difference in beauty between a handsomely-shaped tree, and one of uncouth or distorted form, of the same species? How often do purchasers of ornamental shrubs and trees anxiously search for symmetrical specimens—forgetting, or not knowing, that the most irregular may be easily pruned into any desired shape? If the Dutch gardeners display so much skill in training vegetable growth in peacocks and hedgehogs, American gardeners may find an appropriate exercise of their skill in imitating the graceful and beautiful in nature.

At the present season, or during the commencement of vigorous growth, this desirable object may be most easily accomplished. By occasionally removing needless shoots, but more frequently shortening-back such as are overgrown or pinching-in those that threaten to become so, and by lopping certain portions to induce dormant buds to push where branches and foliage may be deficient, a degree of skill may be exercised, not unworthy of comparison with that of the artist who develops a beautiful statue from a shapeless block of marble.

Even small plants, which otherwise would grow tall and meagre, may be made to assume a bushy and thick appearance, by pinching off the ends of the leading shoots while they are young. The English gardeners have acquired a skill in managing in this way their pot plants intended for public exhibition, that is really astonishing to those who first witness the rich and symmetrical masses of flowers and foliage which they are thus enabled to present to view.

A great error is often committed when flowering plants are placed in open ground, by crowding them too closely together, giving them too much the appearance of weeds. They are much the best when every plant is allowed full room to expand. When crowded, the flowers are fewer and more imperfect, and the plants and foliage slender, and greatly inferior in beauty to the dense and rich mass of well developed leaves and bloom of a freely growing uncrowded plant.

### Liquid Manure for Fruit Trees.

Cultivators of the pear are often puzzled to guess the reason that frequently the same tree bears fruit of the best quality, and at others nearly worthless, a fact familiar to all pear raisers. Perhaps this difference is more striking in the case of winter pears, which are sometimes yellow, melting, and delicious, and at others, green, hard, dry and tasteless. We are satisfied that the manuring and cultivation which they get, has a large influence in the matter, and have ascertained that some sorts, to be really fine, must have a warm and rich soil; such for example, as the Easter Beurre, and Chaumontel. We are inclined to think from some little observation, that liquid manure will yet be found to contribute greatly to the full development of the quality of some sorts of pears, and for the information of such as may wish to try it, we here give Dr. Lindley's remarks on the best time for its application. "For fruit, the proper time for using liquid manure, is when the fruit is beginning

to swell, and has acquired, by means of its own green surface, a power of suction capable of opposing that of the leaves. At that time, liquid manure may be applied freely, and continued from time to time, as long as the fruit is growing. But at the first sign of ripening, or even earlier, it should be wholly withheld. If liquid manure is applied to a plant when the flowers are growing, the vigor which it communicates to them must also be communicated to the leaves; but when leaves are growing unusually fast, there is sometimes a danger that they may rob the branches of the sap required for the nutrition of the fruit; and if that happens, the latter falls off."

It may perhaps be well to add, that liquid manure, like all other kinds of watering, should never be poured on the surface about the trees, as this will only harden the crust, without reaching the roots. A few inches of the surface should first be removed, the liquid then applied, and the earth replaced, or else a thick mulching given. The practice of making holes about the tree with a crowbar, and pouring the liquid into these holes, may succeed on porous soils.

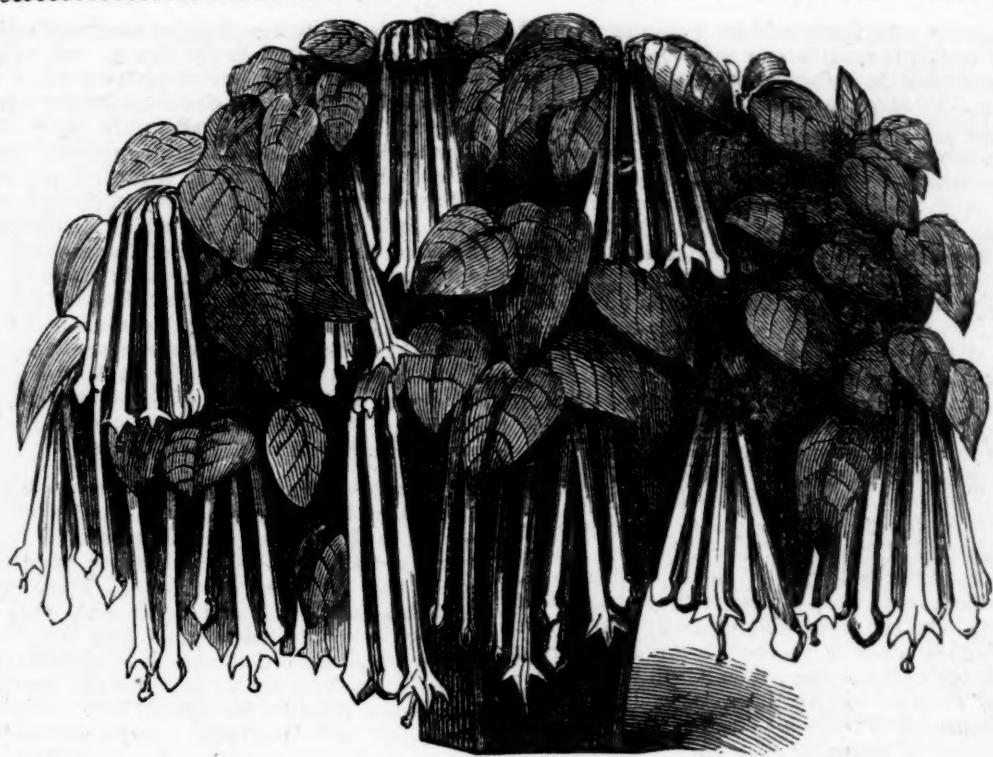
### Experiments with the Curculio.

The number of remedies is a sufficient proof of the extent of the damage committed by these coleopterous rogues, as well as of the difficulty of circumventing their attempts. It would be somewhat interesting, and we fear rather frightful, to estimate the aggregate amount of damage committed by them in the United States; probably it would amount to at least half a million of dollars annually. We therefore cheerfully give to our readers every remedy which promises any prospect of success, for their trial. One of the latest we have seen, appears in the Pennsylvania Farm Journal, and consists in placing a small iron furnace filled with live coals, on a high stool, as near to the lower branches as safety will admit, and then sprinkling pulverised sulphur lightly over the coals. It is done early on calm mornings, so that the fumes of the sulphur pass up through all parts of the tree. The writer states that after several experiments, he found this invariably to bring down the curculos, and to give him good crops among trees which when neglected yielded nothing. Cultivators of fruit may easily ascertain by trial whether this is more effectual, or more easily performed than the jarring method.

A remedy for that pest of the smooth-skinned fruits, the curculio, has been suggested. I intended to have communicated it to you before this; I trust, however, it will be in time to enable horticulturists to try it and test its efficacy. A friend of mine mentioned it to me, stating that he had tried it last year with perfect success.

*Wood ashes*, thrown over the trees when the dew is on, or when the leaves are wet, for a few times, (three or four, unless it should be washed off by a shower,) will be sufficient to prevent the attack on the fruit by this destructive insect.

If the ashes could be sifted on dry, it would be best; if not, they may be a *very little dampened*, just sufficient to enable you to throw them to the top of the tree with the hand. A coarse bag filled with the ashes, and hung on the end of a pole, would be a good arrangement for sifting, by shaking it over the tops of the trees. This sprinkling of the ashes should be commenced as soon as the



FUCHSIA MACRANTHA.

curelio commences to sting the fruit—about the time fruit sets, and the blossoms fall. My principal object in desiring you to publish this in your valuable paper, is to induce as many as will to try the experiment this year, and as soon as satisfied, to communicate the result to you. A. S. R. Hudson, April 16, 1853.

How to SAVE PLUMS.—One of my neighbors has been successful with his, in this way; he threw into the trees unleached ashes, three mornings in succession, when in the fullest bloom. He tried it on a part of his trees one year, and saved them, while the others failed.—the last year on the others, and saved them. W. HUMESTON. Strongsville, April 4, 1853.

#### Culture of the Fuchsia.

The Fuchsia is a favorite with all lovers of flowers, and is well adapted for cultivation by all. For while the hot-house and the green-house may be ornamented with one or other of the varieties of it every month in the year, the cottager may enjoy its beauty in his flower plot during the summer, and keep it in a dormant state in his cottage during the winter, to embellish his garden again another year. There are several ways to grow this flower in perfection, according to the fancy of the amateur. At this season of the year the old plants, are breaking out with quantities of young shoots. These may be taken off when an inch or so in length, will strike readily if potted in white sand, or peat and sand, under a hand glass in a green-house or warm room. The glass should be taken off, and the moisture wiped from its inside daily; if there is any hot-bed, they will root more quickly if placed in it. When rooted they should be potted off singly in small pots. The compost may be peat, (or leaf mold) loam and old rotten manure in equal parts, with the addition of a sixth part of white sand. In a green-house they should

be syringed freely as soon as the plants get six or eight inches high, and as the roots get to the outside of the pots, they should be shifted into larger. If it is intended to bloom them in the green-house, the shifting may be repeated two or three times before July, if it is wished to have a large plant. Partial shading will add to the beauty of the foliage, and the supply of water in hot weather must be liberal at all times. In June, or before, in situations where there is no fear of a low temperature at night, Fuchsias may be turned out into the open borders. A little mulching round the stems will materially benefit them. In the autumn, before the frosts set in, re-pot the plants, or put them in old boxes and remove them to the green-house, or a room to which frost cannot get access, to preserve them through the winter. Fuchsias in pots placed out of doors during summer and autumn, where they get the morning sun only until 9 or 10 o'clock, will be found to bloom profusely; and their flowers will be finer than if fully exposed to the sun's rays all day. The old plants of last year may be made very beautiful objects, if at this season they are shaken out of the old compost in which they have grown, and the *lower* branches cut off close to the stem, so as to convert them into standards. The heads should be cut in moderately, and they should be immediately re-potted in the compost above recommended, in a pot considerably larger than that used last year. Place a strong stick, to which secure the stem firmly, as the wood is very brittle. As the young shoots grow, stop them as soon as they have six leaves, by pinching off the end of the shoots; this must be repeated several times for the next three months, and will produce a thick, bushy head, which, during autumn, will be covered with bloom.

Of late years, the varieties of the Fuchsias have become almost as numerous from increase by seed, as Dahlias and other florist's flowers. The finest,

undoubtedly, are those which, retaining the old type of a purple corolla and crimson sepal, have an improved form and greater depth or brilliancy of color. Of this character, *Corallina*, *Elegantissima*, and *Globosa*, will be found some of the best. The next best (and by some more admired) varieties are those with white sepals, and purple, violet, or rosy corollas; of this class, *Psyche*, *Mad. Sontag*, *Eliza Milliez* and *Gaylad*, are good. There is a class with crimson and scarlet in various shades, in both corolla and sepal; many of which are remarkable for size, both of flower and foliage, but they are by no means so desirable as either of the former. Still for variety, some of them can hardly be discarded. Of these, *Perfection* and *Magnificent* are fine. Two distinct species of *Fuchsias*, from the above, have, within the last few years, been added to our collections, the *Fuchsia fulgens* and *corymbiflora*; and which are fine objects where there is ample space. *F. Serratifolia*, is a fine winter plant; some persons complain of a difficulty in its cultivation, but all that it requires is to give it plenty of pot room, and to take care to keep it clear of the red spider in autumn. On the approach of cold weather, it must not be allowed to receive any check from being in too cool a house; then it will bloom freely from January to April, or later, in a warm green-house. B.M.

#### Kitchen Garden.

*Sea Kale*.—This is a very excellent vegetable, and one which, from its similitude to asparagus, is liked by most persons to whom that vegetable is agreeable. If raised from seed, it may be sown in the fall or in early spring. The plants should be transplanted like young cabbages when three inches high; and if sown in the fall, they should be protected by a frame and lights, or by a little straw thrown lightly over them. In spring they should be planted out a foot apart every way, until October, when they will be strong and fit to plant out permanently. The bed must be deeply trenched and well made, as if for asparagus, with coarse manure at bottom, and very rich earth at top. It must be well drained if the subsoil be wet. The bed should be marked off into squares three feet every way, and three strong plants should be planted eight inches apart at the intersection of the squares, forming a hill. Keep the bed hoed clean, and when the frost sets in and the leaves of the kale die away, they should be cleared off the bed, and a thick cover of manure, leaves, or seaweed, should be put all over the bed, to remain through the winter. After the beds have remained thus several weeks, the crowns of the plants should be examined, and when the shoots have grown four or six inches long, cutting for the table may be commenced.

At any time the growth may be induced earlier if wished, by turning an old box or a large flower pot over each hill of plants, and then covering the bed with hot manure from the stable yard, which will force them without further trouble. The plants should not be cut too much the first year, and as the spring advances the covering should be taken off, (or dug in, if manure) and the growth of the leaves encouraged by the same treatment as for cabbage, through the summer months, by which means they will be strong and yield well the following year. The bed will last for years, being dressed annually like an asparagus bed. Salt may be given in so doing with advantage.

*Brussels Sprouts*.—This is a species of cabbage, of the same kindred as the Savoy, but with this difference, that after having grown two or three feet in height, it throws out small cabbages resembling miniature Savoys, all up the stem. They grow to the size of a small orange, when they are fit for table. Every plant furnishes a number, and those who have eaten them in Europe, where they are in universal use for winter, know them to be one of the most delicious of the cabbage family. The seed should be sown in April or May, and be transplanted exactly as directed for *Broccoli*. In the fall the large leaves of the plant should be broken down, to encourage the growth of the sprouts. They should be boiled quickly till tender, and very well drained; and they will be found a valuable addition to the table. Their flavor is improved by the early frosts.

*Rhubarb*.—This is a most wholesome and desirable plant for early spring. It precedes gooseberries, and makes excellent pies; and like the above vegetable, is of much more general use across the Atlantic than here. When stewed alone in a little water and sugar, and when eaten cold, with bread, it is a good dish for children. To grow it from seed, it should be sown in spring, in drills an inch deep, and a foot apart, and kept clean from weeds by the hoe. When two inches high, thin them to three or four inches apart, and in October they should be planted out in a permanent bed. This should be dug at least eighteen inches deep, and well manured with coarse, stable manure. Then plant the roots two feet apart in a row, with four or five feet between the rows. Cover the bed over six inches deep with leaves or litter in the winter. Every fall the bed should be dug over with a fork, and covered with litter and some manure, and it will produce for years. The best way is to purchase roots, cut them up into as many pieces as the crown separates into heads, and plant them, because, from seed, it will be three years before the rhubarb can be used. The rhubarb may be forced exactly in the same way as we have directed for sea kale, by covering boxes or large flower pots, and heaping hot dung over them. The stalks of the leaves are the parts eaten, and when thus grown under cover they are nearly white, and the better in flavor. The roots may be grown in this way also, without manure for forcing, if taken up in November and placed in boxes of earth, and put under the stage of a green-house. By this means the frost being excluded, it will grow naturally and be ready in February. There is much difference in the quality of rhubarb; that of which the stalk is green is far preferable to that with red stalks, which latter often has too rank a flavor to be agreeable.

*Scotch Kale, or Borecole*.—This is a variety of winter cabbage, giving quantities of sprouts and leaves for winter use, being improved in quality when touched with frost. The seed should be sown in May or early in June, and be transplanted 2 feet apart, and treated similar to summer cabbages. In the south, and in warm positions in the western states, they will generally bear the winter. The best way is at the approach of winter to take them up, and plant them close together in trenches, covering with earth up to the lower leaves, and then straw or litter over them. A better way still, is to set them up in the same way on the floor of a light cellar. Best sorts: *Green Curled Scotch*, and *Dwarf Curled*. B. M.

## Destructive Insects on the Grape.

I have been much troubled for several years by a worm upon my grape vines, and desire to know if there is any way to prevent them from destroying the vines. The egg appears to be deposited by a large yellow bug, striped with black; something larger than what is called a tumble-bug, but of different color. It deposits its eggs upon the under side of the leaf; they soon hatch, not more than one-eights of an inch in length, and arrange themselves along the edge of the leaf, from fifty to one hundred in a place, where they commence eating, and destroy all before them. They increase in size rapidly until about an inch in length, when they disappear. I have destroyed hundreds of bugs and thousands of worms by crushing the leaf. They commence as soon as the leaf puts forth in the spring, and continue to feed upon them and the blossom until the latter part of sixth month. My vines have been almost stripped, and I have almost despaired of having grapes, although I have been laboring with them for six years. Please inform, though your journal, a remedy if there is any. A SUBSCRIBER. Quakertown, Pa., 3 mo. 18, 1853.

The insertion of the above has been unintentionally delayed, but we hope it may not yet be too late. We have had no experience with the insects mentioned—those of a similar character in habits and destructiveness are described in Harris' Treatise on New-England Insects, from which we may, perhaps, furnish some useful suggestions. We incline to the opinion that the "worm" caterpillar is not the progeny of the large beetle, but entirely distinct, and that the two only happened to occur together on the vine.

There is a large beetle (*Pelidnota punctata*) belonging to Linneus' large genus of *Scarabæus*, that often proves quite destructive to the grape. It is about an inch long, oblong-oval, the wing-covers a dull brownish yellow, with three distant black dots on each; thorax darker, slightly bronzed, with a black dot on each side; body and legs, a deep bronzed green. The leaves of the grape are their only food and they are often very injurious. Their larvæ live in rotten wood. If this is not the beetle described by our correspondent, it must be quite similar in character and habits, and the same remedy applies to both, namely, picking off and crushing.

The other insect, nearly resembling the one above described, is the larva of the *Selandria vitis*, a saw-fly or Hymenopterous insect. The following is Harris' description:—

"These flies rise from the ground in the spring, not all at one time, but at irregular intervals, and lay their eggs on the lower side of the terminal leaves of the vine. In the month of July the false caterpillars, hatched from these eggs, may be seen on the leaves in little swarms, of various ages, some very small, and others fully grown. They feed in company, side by side, beneath the leaves, each swarm or fraternity consisting of a dozen or more individuals, and they preserve their ranks with a surprising degree of regularity. Beginning at the edge they eat the whole of the leaf to the stalk, and then go to another, which in like manner they devour, and thus proceed from leaf to leaf, down the branch, till they have grown to their full size. They then average five eights of an inch in length, are somewhat slender and tapering behind, and thickest before the middle. They have

twenty-two legs. The head and the tip of the tail are black; the body, above, is light green, paler before and behind, with two transverse rows of minute black points across each ring; and the lower side of the body is yellowish. After their last moulting they become almost entirely yellow and then leave the vine, burrow in the ground and form for themselves small oval cells of earth, which they line with a slight silken film. In about a fortnight after going into the ground, having in the mean time passed through the chrysalis state, they come out of their earthen cells, take wing, pair, and lay their eggs for a second brood. The young of the second brood are not transformed to flies until the following spring, but remain at rest in their cocoons in the ground through the winter."

The best remedies for these larvæ, are, dusting them with air-slaked lime, washing or syringing them with a solution of one pound of common hard soap in five or six gallons of rain water, or the similar use of a solution of one pound of whale oil soap in seven gallons of water.

## Transplanter.

Permit me to introduce to your favorable notice, an invention of T. D. STETOZON, of Middleborough, Mass., called "Stetozon's Transplanter."

*Fig. 2.* *Fig. 1.* The instrument represented in the annexed figure, consists of a sort of spade, with side cutters, to be pressed into the earth, near the plant to be raised; when the blade, *fig. 2*, which is made to fit the wings, (or side cutters) is forced down on the side opposite the spade, when the plant, with the adjoining earth unbroken, may be raised, removed, and planted in another cavity previously made by the same instrument. D. T. BROWN.

To PROTECT VINES FROM BUGS.—Make boxes from 15 to 18 inches square, and 6 inches high, without top or bottom of course, and place them on the hills before the plants are up, and a striped bug will never touch them. D. M. W. Swanton, *Vt.*

CULTURE OF MELONS.—I plant my Melons and Cucumbers by digging a hole 16 or 18 inches deep, and as far over, and fill with composition and good soil, and they keep green until the frost comes, rain or shine, and bear five times the quantity, being five times as large, and the melons are far superior in flavor, while those planted in the common way, die by drought or heavy rain, and the melon is unripe, unhealthy and worthless, if flooded at the roots. PHINEAS PRATT. Deep River, Ct., 1853.

VEGETATION.—Notwithstanding the inauspicious nature of the weather, which for a time past has greatly retarded the progressive development of vegetation, it may at length be considered but little, if at all, behind the period of former years. The cherry, the plum, and in warm, sunny situations, the peach, have each profusely put forth their blossoms, affording a richly formed bower to the joyous revelling of the chipping sparrow, the yellow bird, and some other of the early visitors of spring.

## The Grazier.

## Profits of Stall Feeding.

I notice in a late number of your paper, a statement of the profits of feeding three cows, by "Vermonter," with some plain common-sense remarks, inviting farmers to transmit their experience to the columns of the Cultivator, for the benefit of its readers. He culled three cows from his dairy herd, and stall fed them at a very fair profit, viz, \$23. I am also a Vermonter, and hold that we cannot be easily beaten in the profits of farming by other localities, whenever we put in requisition the full resources which nature has given us.

I culled one cow, from my limited number of four, dried her 1st Sept.; fed with pumpkins and short grass, until 20th Nov., then with corn-stalks, hay and corn in the ear, ground, until the 22d of March, when I sold her to go to Brighton market, with the following results:

Value of cow on 1st Sept.,.....	\$15 00
Grass \$2, three cart load pumpkins \$2,.....	4 00
Hay and other coarse feed through the winter,..	7 00
Corn, with the expense of carrying 3 miles to mill,.....	24 00

Total cost of cow when fatted,..... \$50 00  
Estimated to weigh 1000 lbs.; sale on foot at the barn, \$72; profits \$22.

Her blood was three-fourths Native, one-fourth Durham. She was large and very fat, worth at Brighton, \$7.50 per 100 lbs., which left \$3 for drift by railroad, just a fair compensation.

I also stall fed 123 weathers, all of my own raising, four years old last May and June; a cross between the full blood Spanish Merino and Saxony; very fine quality of fleece, a race which all wool-growers know never attain to a large size. I was offered \$2 per head for them in Nov., and my neighbors considered it a very generous offer; it was all they could have brought at that time. I commenced feeding them with corn unground, on the 24th of Nov., and followed it without change, (except in quantity) until the 29th of March, when they went to Cambridge market, with the following results:—

Sale, 123 head at \$6.60 per head,.....	\$811 30
Value of sheep in Nov.,.....	\$246 00
20 tons English hay of good quality,..	200 00
200 bush. of corn at 80c, (the market price,) .....	160 00
Cost of getting them to market by railroad, .....	44 28
	650 28

Profit, ..... \$161 52  
Or a fraction over \$1,31 per head.

It is a satisfaction to the grower, to be enabled to say, that these sheep, considering the superiority of blood for wool-growing purposes only, the fineness in texture of fleece, and the number raised and fattened in one flock, were deemed by the sheep dealers at Cambridge, equal if not superior to any ever taken to that market, from any one flock in Vermont.

And now a word as to the manner of feeding. My sheep and cattle yards have open sheds, with a southern or eastern exposure. Cattle are stabled nights and mostly in stormy days; sheep go out and in at their pleasure; pure, soft aqueduct water in each yard, with a box of St. Ubes' salt constantly supplied, which I consider quite as essential in winter as summer; yards and sheds kept dry by straw and other coarse litter. A large stable connected with my sheep yard, enables me to shut them off when putting hay into their racks, or grain into their troughs, so that they all go to their feed together, and share as equally as possible. I commenced this flock of weathers, with twenty quarts of corn per day, and from time to time, increased gradually as they would bear it, without producing the scours, until they would take 70 quarts per day, with as much good hay as they would

eat without waste. It will not pay the cost and trouble to grind any kind of grain for sheep, though it always should be done for cattle or hogs. No whole grain passes the stomach of a sheep undigested. The ewes belonging to this flock of weathers, (those of the same year's growth,) were sold when two years old, to go to Western New-York, where I have no doubt they will contribute to the improvement in fine wool.

Now I am upon the subject of farm profits I will further say, that my flock of sheep numbered, one year ago, 520, and by reference to my account of sales, I find the amount in wool and sheep, to be \$1,760.00 from the flock during the year; but I have reduced the number 200, and added some extra feed; yet the profit is remunerative and satisfactory.

I do not, Mr. Editor, make these statements in a spirit of egotism or boasting, but I have noticed in some of the late numbers of the Cultivator, complaints by some of your correspondents, about the meagre profits of farming, and expressing doubts whether it can be made profitable. It is to be regretted that such erroneous views, however honestly entertained, should obtain currency. This is one reason why so many of our young men are averse to the calling. True it is, we cannot become millionaires or hundred thousanders, by farming; nor is there much danger of becoming bankrupts. I speak from experience, and I do say, that on all good soils and favorable localities for market, by industry, perseverance, and economy, skill and good judgment, farming is remunerative and profitable, and if steadily pursued for a term years, will result in competency and independence. J. W. COLBURNE. *Springfield, Vt., April.*

## Training Colts.

I have a good two-year old colt, that I wish to break, and not being used to breaking and training colts, I should be well pleased, if you would inform me the best way. Any information that you may give, will be thankfully received. H. D. CLARK. *Florida, N. Y.*

We commend to the attention of our correspondent, the following judicious directions, which we copy from the Valley Farmer. The same course must be pursued for a colt two years old as for one younger, only the task will be more difficult. This course is strictly *training*, not *breaking*.

There is no greater mistake than to postpone breaking. It should, in fact, be commenced at the very period of weaning; it should, in this manner, be commenced and prosecuted gradually, with gentleness and kindness. Let the young animal be daily handled, caressed, and led about, and let him occasionally be rubbed down, and even at times tied up for an hour or so. The man who feeds the colt, should have the entire management of him at this time, and he should be a respectable person, characterised by equanimity of temper and a kindly disposition. Half the battle in horse training consists in this early management; many a horse is spoiled and rendered permanently intractable by early harshness or improper treatment, and many a horse that might otherwise have turned out a vicious, unmanageable brute, has been moulded into a gentle, affectionate, and useful servant by the judicious treatment of those who first inducted him into the knowledge of his duty.

For the first year such treatment will suffice; after the second winter, the operation of training may commence in good earnest. The horse must be first bitted, but the bit at first used must be small, and of such form as will not hurt his mouth. The work of bitting may occupy three or four days. When the colt becomes accustomed to the bit, he may then have two long ropes attached to it, slightly fastened to his sides by a loose girth over the back, and his feeder may thus drive him as it were, round a field, pulling upon him as he proceeds. This will act as a first lesson in draught. If intended as a saddle horse, a filled bag, may be thrown across his back and secured there, and after a while, when he has become used to this, a crotch may be fastened upon his

back, the inferior extremities grasping his sides, and thus inuring him to the legs of a rider.

Portions of harness may now, from time to time, be added, the winkers being kept for the last. He may now be put in a team, and it is better he should be one of three, having one before him and the shaft horse behind him. It is best to begin draught on grass, where the colt will not be frightened with the noise of the wheels. He has enough to occupy his thoughts without that, and the grand secret consists in not hurrying or confusing him. Let everything proceed gradually and by successive stages, and above all, let me entreat that no whip or harsh language may be permitted to be used.

Breeders of horses are very apt to fall into a common fault, viz: of postponing the breaking of them to a period comparatively advanced, and then fancying that the training can at once be affected. We have endeavored to show that the work of training should be a gradual and progressive one, and that it should rather consist of a consecutive system of judicious management than be converted into a separate business, suddenly undertaken and summarily performed. If the colt has been treated as we recommended, much subsequent trouble will be saved his owner; if it were generally so treated, there would be fewer instances of vice and sulkiness displayed by the adult horse.

All horses, especially such as are required for agricultural purposes, should be broken into the saddle as well as the harness. This is easily effected when once the animal has suffered himself to be yoked in the team, as already described. Let his accustomed feeder and handler be the first to mount him; there is no doubt that the colt will suffer him to do so without struggling, and gentleness alone is requisite to complete the lesson thus auspiciously begun. At the same time that mildness is absolutely necessary, it is not less essential that the colt be taught implicit obedience to the will of his master. For this purpose, however, neither the whip nor spur must be employed, nor must he be shouted or hallooed at; nothing is required but firmness, steadiness, and patience—the three great requisites in a successful horse-breaker.

When the colt has acquired the art of drawing and carrying, it will be time to instruct him in, perhaps, the most difficult part of his duty—backing. This must be done cautiously at first, by the long rope, and gradually. Let first a light cart, and then a loaded one be added; let care be taken not to hurt the mouth with the bit; many a good and valuable horse has been spoiled by this bad management. Patience and gentleness will effect everything; a contrary course of treatment will generate vice. Few, it may be said almost no horses, are naturally vicious. It is cruel usage which has first provoked resistance. That resistance has been followed by greater severity, and the stubbornness of the animal has increased. Open warfare has ensued, in which the man has seldom gained advantage, and the horse has been frequently rendered unserviceable. Correction must be used to enforce implicit obedience after the education has proceeded to a certain extent, but the early lessons should be inculcated with kindness alone. Young colts are sometimes very perverse. Many days will occasionally pass before they will permit the bridle to be put on, or the saddle to be worn; and one act of harshness will double or treble this time. Patience and kindness, however, will always prevail.

#### Hoven in Cattle.

As I have seen many remedies for the cure of hoven or bloat, and have never seen what I think the best, I would say that I regard fat salt pork as the most effectual remedy that can be used; and I would state, that after making use of it for twenty years, I never knew an instance, even in the most severe cases, where it failed to give immediate relief. The first trial that I made, was on an ox, that had eaten nearly one bushel of pototoes, and fed on fresh clover. Oil and other medicines had been given, and he had been tapped, but

all to no purpose. We gave him pork, and I think he was relieved in less than 15 minutes. The next was a cow, that was near calving. She broke into a field of ripe corn, and eat what she would. The owner was absent, and his wife asked me what to do. She was down, and we could not get her up. I called for pork, and gave her one pound or more, and in 10 minutes she was up, walking about. Soon after I moved into this town, a man called on me one evening, and asked me if I knew of anything that would relieve a creature that was bloated. He said he had a cow that had eaten rye bran, and was badly bloated, was down, and five men had tried a number of times, and could not get her up. I told him of pork. He afterwards told me that he had made another trial, but could not get her up. He then cut up 1 1-2 lbs. of pork and gave her, and left her for the night—went out in the morning, and found her up about the stable. I could mention many other cases, but these are sufficient. The method of cutting it, is to cut it in slices as you would to fry—let one man hold up the head and hold open the mouth, and another put it in the mouth. If it is thrown up, put it back down near the roots of the tongue, and close the mouth. Some creatures will eat it readily. EBENEZER CLAPP. Hatfield, Mass., March 3, 1853.

#### Management of Sheep.

L. TUCKER, Esq.—In accordance with your request, I will set down some facts in relation to the management of sheep, which much experience has fully established in my own mind. You may be aware that the adjoining counties of Washington and Fayette, have been the most extensively engaged in wool growing of any equal extent in the Union. The large and largest farms have been those most generally devoted to this business, from the fact that these can be more economically, and with infinitely less labor and trouble, grazed with sheep, than devoted to the cultivation of grain. A farm of one thousand acres can be more easily managed with the fleecy tribe, than one hundred acres by the usual process of grain raising. Once down to grass, it remains so for many years; and on such farms, only those fields are plowed up which cease to yield good crops of grass, and require renovation by alternation with grain crops. They then are prepared to yield the heaviest crops of grain. Our experience has fully established the fact that a farm of ordinary or low quality of soil, or one exhausted by excessive cultivation of grain, may be brought by this simple process, to the highest condition, which may the more readily appear from the fact that grass, especially clover, and a less degree timothy, supply the soil with infinitely more of the elements of fertility in their decay, than they have ever abstracted, and also that sheep carry and drop their manure on the tops of hills, which need it most. Our sheep farms range from 150 to 1000 and more acres, and although the average value may be from 35 to 45 dollars per acre, the owners believe they derive more profit from appropriating them to wool-growing, than the cultivation of grain.

1st. There is no mystery in the management of sheep. Care and attention, guided by observation and common sense, are the only essentials. He who can properly manage a farm in other stock, must make a successful wool grower. The careless shepherd, whose sheep die off with the rot and other diseases in the spring, throws all the blame on ill-luck—or the mild winter or the hard winter—on the wet spring, the early spring or the late spring—little suspecting or crediting that he alone made his own ill-luck—that he had let his stock get too poor in the fall, to enter on the winter—that one or two weeks of starvation will inevitably, even with sheep in fair condition, produce the hunger-rot, (the most formidable, but least known, disease to which our sheep are exposed, and of which the victims must die in the spring,)—that he has permitted them to be mercilessly exposed without shelter to all the snows and rains and wind and cold of a long winter. The fantastical and fancy amateur sheep raiser may fabricate a system as intricate and

mysterious as the hieroglyphics of Egypt, but common sense will laugh it all to scorn.

2d. My plan, pursued for many years, has been, as soon as the grass failed, to put my sheep into small enclosures or yards—say containing about one acre—from which they should not be permitted to depart (except a very few times) until the grass is sufficiently advanced for their support, say from April 10th to May 1st. I have even kept up my wethers with advantage until ten days before clipping, when pasture was scarce. The advantages of this mode, are that the sheep take immediately to their dry feed when put up—their *relish* for dry feed is not destroyed by the insufficient *taste* of grass they can pick up during the winter—they eat their feed readily and lie down. Another benefit of this plan, even greater, is in the spring. The springing grass tempts them from their hay—they will not eat it, when permitted to wander over the fields; while the grass itself is not sufficient in quantity to sustain them, and even what they do get does them a serious injury in its tender state, by producing scours, which in the spring is nearly the synonym of death. Some may fancy this course is unnatural. I say experience is higher authority than fancy. I make another point of economy. Pasture, if you please, your clover and timothy fields during the month of April, and you may expect but little from them during the whole summer; and besides they become permanently injured—whereas if you permit them to attain their full strength until the 5th or 11th of May, you can scarce get the better of them. One month's pasturing in the spring, after the grass has started, is worse than three months later in the season. Many farmers object to the keeping of sheep, that they cannot get them through the spring until grass comes. To such I would say, select and fence an acre of ground—including a spring or watering place—sheltered by woods or a hill from the prevailing cold winds—soil not liable to become muddy, and sufficiently inclined to carry off the water—completing the whole with a shed or shelter as cheap and rough as you please—but in any event a shelter to protect your sheep and hay while being fed. In reference to ewes with lamb, this plan must be somewhat modified.

3d. As to washing sheep, there is unnecessary expense and trouble. Many years since my Scotch shepherd thought to experiment on our fine wooled sheep with his national custom. *Imprimis*, the eke or grease of wool is absolutely a soap, composed of an alkali and oil, and is perfectly *soluble* in water. A pen is built on the edge of a creek, from which a platform three or feet above the water, extends one foot over the edge of the water. A pool five feet deep, with a gentle current, should be selected, three or four sheep being thrown over and made to swim to the opposite bank. The others will follow of their own accord, (and a very handsome sight it is) mostly one at a time. After being permitted to stand 15 or 20 minutes, they are again forced in from a like platform at another suitable place on the opposite side, and have from six to seven plunges according to circumstances. The great secret is, give the grease time to dissolve, and while waiting, remove the foul taglocks with a pair of shears. It is of importance to have a nice gravelly or sandy beach, up which the water-laden sheep may ascend with ease. Two men and a dog, have, in this way, often washed six and seven hundred in a day. Sheep are less exhausted than by the old method, and the wool is perfectly clean, if properly done.

4th. Each class of sheep should, if possible, be kept separate, and all not doing well, should be put among the hospital flock, and receive particular care.

5th. All sheep in any way defective, or unprofitable as to wool, should be selected and marked at shearing time.

6th. There is no necessity for changing sheep. Select good and healthy bucks, and avoid breeding in and in, and you may keep the same stock for a century.

7th. I believe our American Saxon and Merino sheep, are the most healthy and the most exempt from disease of any domesticated breed in the world—greatly more

so than our coarse wooled native, and are more hardy. This may seem a hard saying, but remember that while only a few natives are usually found on a farm, the fine wooled are kept in large flocks, consequently have greatly restricted privileges. G. E. H. *Brownsville*,

#### Points of Excellence in Cattle,

*Adopted by the New-York State Agricultural Society, for the Guidance of the Judges at their Annual Fairs.*

The numbers affixed to the points described form the *maximum* that is to be allowed for each; and in proportion as the animal under examination is deficient in any point, so will the Judges decrease the number, even should nothing be allowed for that point.

Points which are characteristic, and therefore common to a *breed*, though very valuable in themselves, are marked comparatively low, because they are easily obtained and demand but little skill or attention on the part of the breeder; nevertheless, an animal not possessing the characteristics of *its own breed*, must of necessity be almost worthless. On the other hand, it will be observed that points of less value, perhaps, in themselves, but which are characteristics of *deficiencies* in the breed, or at any rate difficult to sustain at their maximum excellence, are marked numerically high, as they go far to complete or perfect the natural excellence of the animal.

Again, for the above reasons, it will be found that the *same points*, in *different breeds*, have different numerical values attached to them.

POINTS OF A SHORT-HORN COW—1853.  
PEDIGREE—showing unbroken descent, on both sides, from known animals, derived from English herds, as found in the English or American Herd Books, and without this, an animal cannot compete in this class.

THE HEAD—small, lean and bony, tapering to the muzzle, ..... 3

THE FACE somewhat long, the fleshy portion of the NOSE of a light delicate color, ..... 2

THE EYE is of great significance, and should be prominent, bright and clear—“prominent,” from an accumulation of “adeps” in the back part of its socket, which indicates a tendency to lay on fat—“bright,” as an evidence of a good disposition—“clear,” as a guarantee of the animal’s health; whereas a dull, sluggish eye belongs to a slow feeder, and a wild, restless eye betrays an unquiet, fitful temper, ..... 2

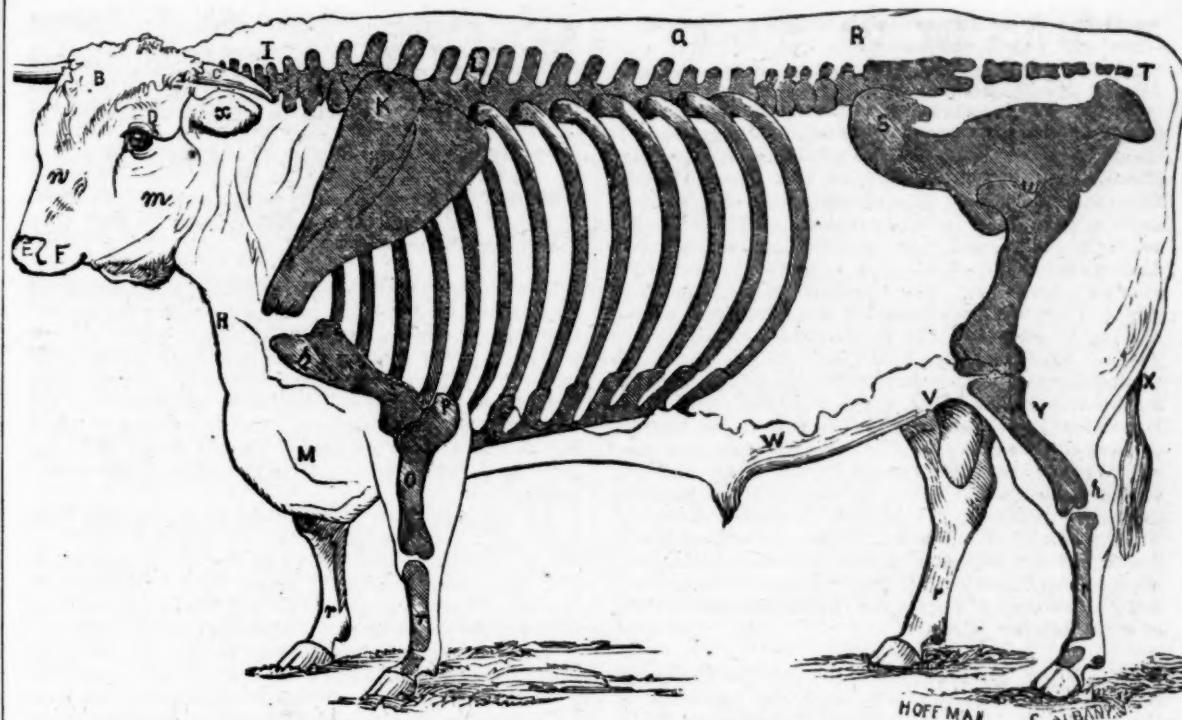
THE HORNS—light in substance and waxy in color, and symmetrically set on the head; the EAR large, thin, and with considerable action. .... 1

THE NECK—rather short than long, tapering to the head; clean in the throat, and full at its base, thus covering and filling out the points of the shoulders, ..... 2

THE CHEST—broad from point to point of the shoulders; deep from the anterior dorsal vertebra to the floor of the sternum, and both round and full just back of the elbows; sometimes designated by the phrase, “thick through the heart.” These are unquestionably the most important points in every animal, as constitution must depend on their perfect development, and the ample room thus afforded for free action of the heart and lungs, ..... 14

THE BRISKET, however deep or projecting, must not be confounded with *capacity* of chest; for though a very attractive and selling point, it, in reality, adds nothing to the space within, however it may increase the girth without. It is in fact nothing more nor less than muscular adipose substance, attached to the anterior portion of the sternum, or breast-bone, and thence extending itself back. This form, however, of the brisket indicates a disposition to lay on fat generally throughout the frame, and in this point of view is valuable, ..... 5

THE SHOULDER, where weight, as in the short-horn, is the object, should be somewhat upright and of good width at the points, with blade-bone



ILLUSTRATIONS OF POINTS OF CATTLE.

A. Occipital Bone—B. Frontal Bone—C. Horn—D. Eye—E. Nose—F. Lip—n. Face—m. Cheek—H. Dewlap—M. Brisket—N. Chest—I. Neck—k. Shoulder-blade—b. Shoulder-points—L. Crops—Q. Back—R. Loin—S. Hips, or Hucks, or Hooks—u. Thurl, or Whirl Bone, or Round Bone—T. Rump—W. Plates of the Belly—V. Flank—X. Cord of the Tail—O. Fore-arm—Y. Thigh—h. Hock—p. the Elbow—r. the Leg or Shank, Cannon Bone—x. Ear.

just sufficiently curved to blend its upper portion smoothly with the crops, .....  
 THE CROPS must be full and level with the shoulders and back; and is, perhaps, one of the most difficult points to breed right in the short-horn, .....  
 THE BACK, LOIN and HIPS should be broad and wide, forming a straight and even line from the neck to the setting on of the tail, the hips or hucks round and well covered, .....  
 THE RUMPS laid up high, with plenty of flesh on their extremities, .....  
 THE PELVIS should be large, indicated by the width of the hips (as already mentioned) and the breadth of the twist, .....  
 THE TWIST, should be so well filled out in its "seam" as to form nearly an even and wide plain, between the thighs, .....  
 THE QUARTERS—long, straight, and well developed downwards, .....  
 THE CARCASS—round; the ribs nearly circular, and extending well back, .....  
 THE FLANKS—deep, wide, and full in proportion to condition, .....  
 THE LEG—short, straight, and standing square with the body, .....  
 THE PLATES of the belly strong, and thus preserving nearly a straight under line, .....  
 THE TAIL—flat and broad at its root, but fine in its cord, and placed *high up*, and on a level with rumps, .....  
 THE CARRIAGE of an animal gives style and beauty; the walk should be square and the step quick; the head up, .....  
 QUALITY—On this the thriftiness, the feeding properties, and the value of the animal depend; and upon the touch of this quality rests, in a good measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body,

4 between the thumb and finger, it should have a soft, flexible and substantial feel, and when beneath the out-spread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal "ripens." A thin papery skin is objectionable, more especially in a cold climate, .....  
 8 15  
 8 THE COAT should be thick, short and mossy, with longer hair in winter, fine, soft and glossy in summer, .....  
 5 2  
 2 THE UDDER—pliable and thin in its texture, receding well forward, roomy behind, and the teats stand wide apart, and of convenient size, .....  
 3 3

100

POINTS OF THE SHORT-HORN BULL—1853.  
 As regards the male animal, I have only to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description as never to be discovered in the females of his get.  
 In contradistinction to the cows, the head of the bull may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form, its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean & free from dewlap. The upper portion of the neck should be full and *muscular*, for it is an indication of strength, power and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

## Notes for the Month.

**POINTS OF EXCELLENCE IN CATTLE.**—So much difficulty had been experienced in selecting Judges on Cattle at our State Fairs, and permitting each successive committee to determine upon its own rules of merit, that the State Society determined to take efficient measures to remedy, so far as possible, the evil; and a committee was appointed some months since, consisting of about twenty of the best judges of cattle in the state, to consider this subject, and to report such rules as they might deem best calculated for a uniform and correct criteria in awarding the premiums of the Society on Cattle. This committee held a final meeting at the Agricultural rooms in this city on the 5th of May. Having concluded their labors, they made their report to the Executive Committee, who at their meeting on the 6th, adopted the Rules reported by the committee, and passed a vote of thanks to FRANCIS ROTCH, Esq., chairman of the committee, by whom the very able and carefully prepared report “on the points of excellence in cattle,” was drawn up. We give the “Points of a Short-Horn” in this number, and shall publish the rules in relation to other breeds hereafter. These “Points” will be found worthy, not only of the perusal, but of the careful study of every breeder of cattle.

**NEW-YORK AGRICULTURAL COLLEGE.**—The corporation of this Institution was organized last week, by the election of JOHN DELAFIELD, of Seneca co., President; Hon. JOHN A. KING, of Queens co., Chairman of the Board of Trustees; JOEL W. BACON, of Seneca co., Secretary; and N. B. KIDDER, of Ontario co., Treasurer. Measures are to be taken immediately to secure the requisite funds, and it is expected that the college will go into operation in the course of the following summer.

**A SOUND SUGGESTION.**—A valued correspondent in Pennsylvania, after expressing his approbation of the Country Gentleman, makes the following suggestion, which is worthy the consideration of both editors and correspondents:—“If I might venture the remark, I would say, that the strongest hold an agricultural paper can have on the body of farmers is, that it should be practical and applicable to every day farm work; and, while enlightened and progressive, should repress speculation, unsupported by reason or experience. The strong hold of ignorance is book farming, theory, &c.; but the discretion of editors may readily silence this battery.”

**UNITED STATES AG. COLLEGE.**—A correspondent writes us as follows:

**Messrs. Editors**—By the “New-York Times” of the 13th inst., I saw that a farmer of Hamilton county, Ohio, had subscribed \$1,000 to the Clay monument project. Now, I am neither a Whig nor a Democrat, but I think it is proper for the American people to testify their admiration of such a man as HENRY CLAY; but the next question is, to know which is the most appropriate as well as lasting monument, that can be erected. It seems to me that it can in no way be better done than by erecting a *United States Agricultural College*, to which the name of this lamented and great man—who was also a farmer—should be given, and the young men who would receive an education in this college, would forever cherish the memory of the “Farmer of Ashland.”

A monumental pile of granite or marble is certainly a fine sight, but when once erected, it benefits no one, and in the course of time it crumbles to the earth; while, if Agricultural Schools were built—instead of monuments—in which a good education could be secured at little cost to those who intend to be farmers, and whose pecuniary circumstances allow them to receive but a poor education, it would benefit the country to the extent of thousands of dollars annually, as the next generation of farmers, being better educated than the present one, would cultivate their lands properly,

and thus add to the national wealth. N. *Northern New-York*, 21st April, 1853.

We like the idea, and should rejoice to know that some admirer, (and few men ever had more devoted admirers,) of HENRY CLAY, had undertaken to carry the project suggested above, into execution. It could be done, were a suitable and competent person to undertake it. The difficulty is to find the man who has the patriotism and the energy to carry such a project into effect. If any of our readers know such a man, we hope they will call him into action.

**THE MICHIGAN DISCOVERY.**—Since our notice of the announcement of the discovery of a remedy for the potato rot, by some person in Michigan, whose friends wished to secure “an ample reward for giving it to the public,” we have been *favored* with the secret, which amounts to just about as much as we supposed. As the secret has been voluntarily communicated to us, without any restraint as to the use we should make of it, we give the following extract from the letter of our correspondent:—

“I suppose, from your article, that you must have seen Mr. Roberts’ pamphlet. If not, as I have received it without any pledge of secrecy, I may say to you that the “remedy” seems to consist simply in leaving the seed potatoes in the hill through the winter, covering the hills with half-rotted straw, chaff or leaves.”

That potatoes may be preserved in this way, through the winter, is well known to every farmer; and that Mr. Roberts’ potatoes may have escaped the rot is by no means improbable. This, however, does not prove that their freedom from rot is to be attributed to the manner in which the seed was preserved through the winter; but rather that his soil and culture were peculiarly favorable to the growth, and we presume early maturity of the plant.

During the prevalence of the rot in England, six or seven years since, this very experiment of keeping the potatoes in the ground through the winter, was repeatedly tried—that is, potatoes were planted in October, November and December, and so covered as to prevent injury from the cold, but in every instance which we remember to have seen reported, they proved as subject to disease as those planted in the spring.

**TERRA CULTURE.**—The *Rural New-Yorker* must have greatly desired to find fault with this journal, or it would hardly have gone so far out of its way as to have dragged it into a controversy about who set “that ball in motion.” We have not only never disputed its claim, to have given it the first kick, but expressly gave it the credit, whatever it might be, of having first “disclosed the disclosures” of “Professor” Comstock. True we have known Mr. Comstock for a dozen years or more; but we have always refused to receive his secret; for however much of a humbug it might be, it did not comport with our ideas of right, to receive a secret, however simple, under an understood pledge not to reveal it, and then to proclaim it to the public. Neither, from all we have heard from those who have listened to Mr. C., did we suppose there was any particular necessity, or that there would be any great “virtue” in denouncing him. A large majority of those who attended his “lectures,” so far as we knew, appeared satisfied with what they got for their dollar; while no one pretended that he was doing the cause of agriculture an injury. We did not, therefore, deem it necessary to make a “virtue” of entering into a contest upon the subject. We were content to let him follow his own course, especially when it seemed to awaken inquiry and to increase attention to improvement in cultivation.

Had the Editor of the *Rural New-Yorker* finished the sentence so abruptly and indefinitely ended by an “&c.,” he would have informed his readers that we did class the important “secret,” with the most commonplace facts, some of which were thereafter disclosed. We had not the opportunity which the *Rural* had “to condemn the humbug,” as we did not hear it “espoun-

ded," and we certainly could not denounce what we knew nothing absolutely about, however well "satisfied of its utter fallacy" from general reasons. We have never considered it any part of our legitimate business to build fences for the sake of getting "on one side or the other," and no "proclivity to dollars and cents" has ever set us "astride" of a fence of others' making.

"FASHION."—We learn that Col. L. G. MORRIS, in company with Mr. F. MORRIS, of Westchester, purchased this celebrated racer, at the late sale of Mr. GIBBONS' blood horses, for \$1,550, with a foal at her foot, by "Mariner." As "Fashion" is now 16 years old, it is the intention of Col. Morris to keep her as a breeder, and we understand he proposes to send her to the stable of Maj. Burnett, the owner of the celebrated pure blood horse "Consternation."

**PLOWING AND MANURING.**—Our correspondent, "Mooers," is partly right and partly wrong. It is a waste of manure to cover it eight inches deep; but to plow the land eight inches deep, and then thoroughly incorporate the manure with this eight inches of soil, is quite a different thing. As a general rule, the finer the soil is pulverized, and the more thoroughly the manure is intermixed with it, the better will be the crop. If the land is in good tilth, the roots of plants will be sure to find the manure.

**THE MISCELLANY AND REVIEW**, is the title of an excellent monthly journal, commenced with the present year, at Memphis, Tenn., by RISK & EBBERT, at \$2 a year. The Editor (Mr. Ebbert) objects to the "usual method of crediting selections, as both uncertain and embarrassing;" but why uncertain and embarrassing, he does not explain. Instead of the old way of attaching the name of the Journal to the article copied, he attaches it to the reference to it in the Index on the cover. Now we think the manner he has adopted, decidedly "uncertain and embarrassing." When the cover or index is lost, as is frequently the case, the reader is left to the "uncertain" supposition, that the article copied is from the pen of the editor, who must frequently be "embarrassed" by thus being compelled to father the bantlings begotten by others. The article on the 186th page of the April number, should have been credited to the *Country Gentleman*.

**AG. ADDRESSES.**—Hon. JAMES A. PEARCE, U. S. Senator from Maryland, is to deliver the annual Address at the Ohio State Fair, and HORACE GREENLY, Editor of the New-York Tribune, at the Indiana State Fair.

**COMSTOCK'S TERRA-CULTURE.**—I have read your reply to Mr. TALBOTT, in the April Cultivator, in regard to Comstock's system of Terra-culture, and wish to say a few words in reply.

I heard Mr. Comstock last March, at the expense of three days time, and some \$12 in money, and must say that I cannot see in what respect he is a humbug. Our company was composed of ten practical men, and so far as I could learn, all were satisfied that his theory is now easily applied, and of great value. He took us on to a field of wheat, and gave us the most convincing proofs of the truth of his statements in regard to this plant.

In trees, there can be no doubt but his ideas are very valuable; and not only so, but I must think perfectly consistent.

I send you the certificates of Professor Norton and Mr. Johnson, which I am sure are new to you, or you would have spoken differently.

I have no apology to make for his course, which prevents 999 in 1000 hearing him. Some arrangement ought to be made so that all might learn who choose. There are very many persons in our State, who now wish to hear him. What I wish to say is, that a man in your position, is not justified in condemning such a thing without hearing for himself. The agricultural community place great confidence in your judgment, and justly, therefore, you ought to be very careful in the use of it.

Before I heard him, I was at no small pains to ascertain the opinions of those who had heard him, and I found none who did not speak favorably. Yours very respectfully, DAVID LYMAN. Middletown, Conn., May 6, 1853.

We cheerfully give place to the above. True, we have not heard Mr. Comstock lecture; but private conversations have led us to believe that he was not the man to reveal any "new" law of nature. Farther than this, we have been assured by competent judges, who have heard his lectures, that he did not reveal anything which was not understood by those well versed in Vegetable Physiology. That there is anything prejudicial to the interests of agriculture in the lectures, we have never supposed; but that the hints he throws out, and the facts which he calls attention to, are any "secret," or are sufficient to constitute a safe theory to guide the farmer, we have never been persuaded of.

**MOWING AND REAPING MACHINES.**—The Rensselaer County Agricultural Society offer a premium of \$20, for the best mowing machine, and the same amount for the best reaper. The trial is to be held in July, and application must be made by competitors by June 15, to B. B. KIRTLAND, Greenbush. The cost, simplicity, durability, power, quality of work, facility of managing and adaptation to uneven surfaces, will be considered. The farmers are wide awake on the subject of reapers and mowers, and it is to be hoped that the results of the trial will be such as to inform the farmer which machine is best adapted to its purpose.

**A METHOD** of increasing the yield of the milch-cow, by selecting proper animals for the dairy; according to GUENON'S DISCOVERY. Improved and simplified, as classified and arranged, by JOHN NEFFLIN. Philadelphia, 1853.

We noticed briefly, some weeks since, at the request of a correspondent, the nature of Guenon's discovery, remarking at the same time that the marks of a good milker, according to this theory, were not infallible, and that the system had been carried to a degree of minuteness and assumed accuracy, hardly applicable in ordinary practice. With these exceptions in view, this mode of examining the value of cows is well worthy the attention and experiment of the proprietors of diaries.

The author of the work before us, (an octavo pamphlet of 54 pages,) is a native of Southern Germany, and having a strong taste for rural pursuits, and becoming acquainted with Guenon's method, he gave it a thorough and practical examination for several years, in his own dairy and in that of his neighbors, and consequently he became a most thorough adept in the examination of the charts found to be so remarkably mapped out on every cow's milk-bag. He has thus been enabled to simplify and present in a clearer and more comprehensive shape, the system of Guenon, and has furnished his work with a table or chart, representing in 78 figures, the various gradations of value in cows, from the deep milker of twenty quarts a day, down to the worthless animal of only two quarts.

There is a sort of quaint egotism occasionally displayed, not often found in American books, which ought not to prejudice the reader against this author. It appears that he held political offices for nearly thirty years in Germany, and to use his own words, "Elected representative for the Assembly of the States in 1831, I was appointed on the committee of agriculture, and on that for the diminution of feudal taxes and tithes. In this capacity, and as editor of the 'Field and Garden Gazette,' I joined the opposition, and continued with the party, until on the first of October, 1848, by a speech in the popular Assembly at Heilbronn, the text of which I had taken from the Bible, and had changed to suit the times, 'Render to Cæsar the things that are Cæsar's, to the people the things that are the people's, and what remains to the king,' I had attracted the favorable notice of the government, which had become re-actionary to such a degree that they contemplated appointing me for a couple years to a government situation in one of

their prisons; but which, having been early apprised of their kind intentions towards me, I evaded by sudden flight."

He came to Philadelphia, where his skill was thoroughly tested by a committee of the Philadelphia Society, for the promotion of agriculture. "More than forty cows," say the committee, were examined by this gentleman in the presence of members of the committee. All the remarks of Mr. Nefflin, all the questions and answers, were taken down at the moment by a phonographic reporter; all his statements were compared with those of the owners of the cows. After a full and particular investigation, carried on in the most searching manner, and sharpened by incredulity, the committee have no hesitation in giving their adhesion, and expressing their concurrence with the views of Guenon. The precision and accuracy with which Mr. Nefflin describes the qualities of the animals, and the unhesitating manner in which he revealed all their properties, could not but impress the committee with an entire reliance on his own skill, and a perfect confidence in the views of his teacher." Several certificates are added, showing the striking accuracy with which he described the various qualities of cows, entirely unknown to him except by the examination he gave them on the spot. After examining the excellent herd of J. Wilkinson, he remarked, "that he supposed Mr. Wilkinson had been near twenty years in getting his herd to such perfection," to which the latter replied, that "he had not owned a cow in his dairy more than two years and three months, but that he had selected them on this system."

Those who wish to give this system a thorough examination, will find the work of John Nefflin, the best and most clearly understood of any that has yet appeared, but they should remember that the art is not be learned in a moment, and that blunders made by superficial examiners are not to be received in proof of its fallacy.

TRAVELS IN EGYPT AND PALESTINE. BY J. THOMAS, M. D. Lippincott, Garmbo & Co., Phil.—The narrative which comprises this interesting little volume, is from the pen of a gentleman well known for his classical and oriental knowledge, and who, in an easy and graceful conversational style, has given us fresh, off-hand sketches, written on the spot, conveying a vivid picture of the scenes which passed under his observation. The route taken was in some respects different from the usual track of tourists, and portions will be quite new to most American readers. We have not, for a long time, met with a similar work, where amusement and valuable information are more agreeably combined.

The book contains an engraved view of Gibraltar from the west, which we are assured is a very accurate portrait of this remarkable fortress; and the representation of the blocks of stone at the Temple of Balbec, with a man on a ladder's top at their side, conveys a clear idea of their enormous bulk. The work will be found a most agreeable companion for an occasional leisure hour. It may be had of Gray, Sprague & Co., Little & Co., and Pease & Fisk, in this city.

SALE OF HIGH BRED CATTLE.—We wish to call attention to the auction sale, advertised in our columns, by Col. SHERWOOD, which takes place at Auburn, the 8th of this month. The public can rely upon the purity of the stock, as the herd has been carefully bred from imported and superior animals.

HATCHING TRANSPORTED EGGS.—A correspondent of the Ohio Farmer, says that eggs carried forty miles by railroad, packed separately in paper, with the small end down, nearly all hatched. Would not cotton batting, wool, or curled hair, be suitable for packing, for breaking the motion and jar?

TO CLEAN WHEAT FOR SEED.—The brine in which hams have been pickled, is the best that I ever used for this purpose; it being thick, in consequence of blood and molasses, it will take out every oat, &c. D. M. W.

#### Agricultural Societies.

NEW-YORK STATE.—The Executive Committee meeting for May, was held on the 5th. Present—LEWIS G. MORRIS, President; William Kelly, George Geddes, R. H. Van Rensselaer, Joel W. Bacon, T. C. Peters, Vice Presidents; J. T. Blanchard, Charles Morrell, Ex. Com.; B. B. Kirtland, Treas.; E. Corning, Jr., and B. P. Johnson, Sec'y's; E. P. Prentice, John Delafield, John A. King, Col. J. M. Sherwood and Anthony Van Bergen, Ex-Presidents, were also present. Minutes of last meeting read and approved.

The President, Mr. MORRIS, from the committee appointed to locate the grounds for the Fair at Saratoga, reported, and the report was adopted; but was subsequently reconsidered on motion of Mr. KELLY, and the committee directed to make further examinations, and in their discretion select grounds for the Fair.

GRASSES.—The Secretary presented a letter from Messrs. Charlwood & Cummins, Seedsmen, Covent Garden, London, containing a list of prices of grasses ordered by the Society for trial. (Persons desirous of making trial of any of the varieties of grasses which have been selected, are informed that the seed will be received in time for fall sowing, and an early application is requested.)

A vacancy having occurred in the committee appointed at the annual meeting, on the subject of the location of the annual fairs of the Society, C. S. WAINWRIGHT, Esq., of Rhinebeck, was appointed by the President, in the place of Shephard Knapp, Esq.

FRANCIS ROTCH, Esq., of Morris, the chairman of the committee on points of excellency in cattle, presented the report of the committee, which, after consideration and discussion by Mr. Geddes, Mr. Prentice, Mr. Peters, Mr. Morris and Mr. Kelly, was on motion of Mr. KELLY, seconded by Mr. PETERS, unanimously adopted, and 2000 copies ordered to be printed in pamphlet form.

Mr. KELLY offered the following resolution, which was seconded by Mr. PRENTICE, and after a few remarks from Mr. Kelly, Mr. Prentice and others, was unanimously adopted.

*Resolved*, That the thanks of the Executive Committee be presented to FRANCIS ROTCH, Esq., chairman of the committee on points of excellency in cattle, for the very able and carefully prepared report which he has presented on that difficult and important subject.

The list of Judges for the annual Fair was taken up and completed, and the Secretary directed to inform the persons selected, and ascertain whether they will serve.

Adjourned to 1st Thursday in June, at 11 A. M. B. P. JOHNSON, Cor. Sec'y.

ARRANGEMENTS FOR THE NEW-YORK STATE FAIR.—The Central Line of railroads from Buffalo to Albany; Watertown and Rome railroad; Hudson River, Harlem, Troy and Schenectady, Troy and Saratoga, Schenectady and Saratoga, Saratoga and Whitehall, and the roads north, will bring to the Fair, as heretofore, articles and stock for exhibition FREE, (requiring pay for stock and articles when received on board cars, and on return with certificate of exhibition, the amount paid in all cases to be refunded.) It is expected also that the same facilities will be furnished over the roads from Boston, and several other roads in this State.

As an impression exists that stock and articles, and visitors cannot reach Saratoga expeditiously, from the Central roads at Schenectady, it is proper to state, that the road from Schenectady to Saratoga is now laid with the *heavy rail*, and is in the very best condition, and that in connection with the Albany and Schenectady road, it is run with as much speed and efficiency as any road in the country; and that the most positive assurances have been given that engines of the highest power and speed, and cars in abundance, both for stock and visitors, shall be furnished, and taken over the road as rapidly as over any of the other roads.

From New-York, by the Hudson River and Harlem roads, cars will run through to Saratoga, with stock and articles for exhibition, and visitors will be carried

with great expedition. The Hudson River boats will also afford every facility for the transportation of articles and passengers.

From the northern parts of the State, Vermont, New Hampshire and Canada, the facilities will be such as to enable exhibitors and visitors to reach Saratoga without delay, and will afford to them facilities that have never before been enjoyed for attending the Exhibitions of the Society.

The Show Grounds will be located near the village, and will be arranged in the most convenient manner for the accommodation of exhibitors and visitors. Covering will be provided for all the stock exhibited, to protect from the weather; and every exertion will be made to have the preparations superior to any that have heretofore been made for the exhibitions of the Society.

The keepers of public houses have entered into an engagement that their prices shall be only those charged to ordinary visitors; and from the large number of houses, and the range of prices from 75 cents to \$2 per day, during the Fair, there can be no doubt of persons securing accommodations, both as to price and fare, that will be satisfactory.

The Executive Committee will endeavor, in every respect to have the Exhibition such as will, in all its characteristics, sustain the well earned reputation of the Farmers, Breeders and Mechanics of the State; and they have assurances, which they cannot doubt will be realized, that they will be most cordially sustained by the citizens of the State. B. P. JOHNSON, *Cor. Sec'y.*

#### Trial of Implements.

We noticed last week, the premiums offered by the Rensselaer County Agricultural Society, for the best Reaping Machine, and the best Mowing Machine. Those wishing to compete must become members of the Society, and enter their machines before June 15, which may be done by addressing B. B. Kirtland, Greenbush, Rens. Co., N. Y., who will furnish all desired information, and give due notice of the time of trial. The machines to which premiums are awarded, are required to be exhibited at the next fair of the Society to entitle them to the premiums. The committee appointed by the Society to conduct the trial, consists of

B. B. KIRTLAND, Chairman.

Richard J. Knowlson, I. T. Grant,  
Benj. Starbuck, Martin Springer.

The scale of points by which the machines are to be judged, is as follows:

1. Cost of machine.
2. Simplicity of construction.
3. Durability.
4. Effective power; or power required for a given amount of work, including the necessary attendance.
5. Rapidity of action; or amount of work performed in a given time.
6. Quality of work, and the manner of leaving the grass or grain.
7. Facility of management, including time and room required for turning.
8. Adaptation to uneven surfaces, and to cutting at different heights.

Competition is open to the world, and as the points of merit by which the machines are to be adjudged are thus distinctly laid down, the farming public may reasonably expect to derive reliable results from this trial. When the day of trial is fixed upon, notice will be given.

**ARABIAN HORSES IN MAINE.**—It would seem from communications in the *Maine Farmer*, that a full blooded Arabian Stallion is owned in Gorham, in that state. He is the horse that was presented by the Sultan of Muscat to Hon. David Pingree, of Salem. It further states, that Mr. Bennet, of Salem, has three stud horses of the get of "Imaum," strongly resembling their sire. M. L. Hayes, of Farmington, N. H., has also three colts of the same stock.—*Granite Farmer.*

#### Another Review of the Geneva Trial OF HORSE POWERS, &c.

I hereby make my statement in relation to the Geneva Trial of Machines.

In the first place, I have a few words to say in relation to the report, and also the course of the committee. I would here state, that there was only three men that constituted the examining committee on Threshing Machines; they were J. S. Gould, J. E. Holmes and Gen. Harmon. The report of the committee was not according to the record as taken at the trial, and kept by Mr. Gould. They make a reduction of more than 30 per cent in the operation of my machine from the record as they kept it at the time; and this was the only experiment, excepting the threshing, that had any merits in it. Mr. Gould told me, just as I started to leave Geneva, that in looking over his minutes, he thought that they had made a mistake, as his account gave me more power than in some other experiments, and placed my machine ahead of the others. I wrote to him afterward, and proposed to have the experiment tried over again at the State Fair at Utica, which he assented to, and I believe that the notice of the same was given to the others.

I took my machine to the Fair as agreed, and the others were brought there also. When the committee came to make the trial, they took an entire different course from what they had done at Geneva, and I could not prevail upon them to try the Geneva experiment over again, to see whether they had made the blunder that they report was made, (or the one that was made by their report.) It seemed as if they now knew what course was necessary (from the Geneva trial) to take to make the experiment appear favorable to the Emery power; in this they were some disappointed, as their plan placed Badger's ahead; but this they got around by saying that Emery's was made in a superior manner, which they could not say of mine.

Their correction of the minutes as kept at Geneva, made it into an error, as was manifest to any observing person. Taking it as they reported, it would only require movement of the platform of  $1\frac{1}{2}$  of a mile per hour; the persons on the power, and others looking on, could plainly see that they were walking much faster than that.

There is another thing in relation to one of the committee, (Mr. Holmes) that was not right in appearance, and that is, he said or stated, at the State Fair, that Emery was to exhibit his machines, (the Dick anti-friction presses) at the Ohio State Fair the next week; this showed such a combination of interest, that there was some danger of having his judgment biased in making up his report; to say the least of it, it made him liable to suspicion of partiality.

After the committee had concluded upon their report, and one of them, Mr. Gould, had left, as I was informed, I called upon the other two, (not as a committee,) to come and see if they had been justified in making the error (by correcting one as they said) in their report of the Geneva trial. One of them declined, the other promised to re-examine, but failed to do so for some cause or other. Thus much for the committee and their report.

I will now examine the experiments made at Geneva. In the first place, I will state that the machines under review—that is mine, Emery's and Badger's—were all new, and had not been used before. Emery's had some things about it to please the eye of some lookers on, and perhaps some of the committee, such, for instance, as the turning of a bolt and nut, all of no practical use, and rarely if ever done by any threshing machine builder. Emery obtained some advantage over the rest, by having a team (belonging to one of the committee, as I was informed,) employed for the week, which enabled him to keep experimenting with his machine, and to learn when it was ready for use, and thereby smoothing up his machine to his advantage in the experiments to be made with it. He altered and repaired and experimented until Thursday afternoon, when he threshed his 100 sheaves under the direction of the committee; this took him 17 minutes, with his concave raised three-fourths of an inch, consequently he did not thresh his grain clean from the straw, as I learned the next day, by putting some of his straw through my machine.

The next morning, I obtained a team to make my experiment in threshing. This team had never been on such a power before; when they came, I put them on to see if my power would work, not knowing anything of its operation only from appearance, as it was the first one of the kind that had ever been put in operation. To try it, I got some of the straw threshed by Emery the day before, and put it through my machine. I left my concave close to the cylinder, seeing that Emery did not thresh his clean with his up.

The committee now determined to have the grain weighed in making the experiments. They allotted to me 954 lbs. on my first trial, which took me 13 45-60th minutes, and gave 200 lbs. wheat. On my second trial, I had 748 lbs. and was 9 minutes in threshing, and had 136 lbs. wheat, (not 106 as the committee reported.) This last 100 sheaves had two kinds of

wheat, of nearly equal proportions; one kind was weevil eaten and rusty, and green, with very little wheat in it—the green kind was quite small sheaves; yet I could not thresh them much more than half as fast as I could the other kind. In this last experiment my concave was raised  $\frac{1}{4}$  of an inch. After the wheat on my first trial had been taken up and weighed by the committee, I found that they had left considerable on the ground. I should think 6 or 8 lbs., thereby diminishing my yield to that extent.

Emery, on his second trial, had allotted to him \$10 lbs., taking 10 40-60th minutes in threshing, and gave 169 lbs. wheat, (including what might have been gathered from his first threshing)—his concave about the same as on the first trial of his machine. Badger had 850 lbs. allotted to him, which took him 17 40-60th minutes, and gave 156 lbs. wheat.

In both of my experiments, I labored under the disadvantage of an imperfectly operating riddle, it having too stiff a spring for a pitman, which caused it to jar a great deal when running fast; this caused me to run my cylinder 100 revolutions per minute slower than Emery did his, when it should have run 100 faster, with the same movement of the platform. This caused the horses to perform  $\frac{1}{2}$  less labor than on Emery's, in the same time. Taking this into consideration, I threshed my first with less power, according to the quantity threshed, than Emery did his second, and that with his concave up; and the last 100 sheaves there was no chance for him to dispute its being threshed quicker than his, and also better. If these experiments do not prove the superiority of my machine over Emery's and all others, then I wish the committee would inform me what would.

The experiment in which the committee altered their account, (and making an error thereby,) was in trying the several machines with six men on them, weighing 925 lbs.; the machines in the same position as when threshing. Mine gave 350 revolutions, as I noted at the time—356 as the committee noted at the time, and 256 as they reported. The 356 as noted by the committee, would give about 2,250 revolutions of the cylinder. Emery's gave upon the same trial, 240 revolutions of band wheel, and about 2,100 of cylinder. My cylinder was 15 lbs. heavier than his. These experiments again showed a decided superiority of my machine. The great difference in the gearing between my Horse Power and the others, my band wheel turning three times to either of the others twice, with the same movement of the platform, which permits me to use a much smaller band wheel and larger pulley on the cylinder, which enables me to use a much slacker band, causing less friction thereby, which is one of the causes of the superiority of my machine.

The other experiment made could form no correct data to judge of the merits of the several powers, as there was so much difference in the movement of the platform to each turn of the band wheel; in order to have made an equality in the experiment, the powers should not all have been at the same elevation as they were, but should have been so elevated as to have caused the same perpendicular descent of the weight on the several powers to each turn of the band wheel; this would have elevated mine near six degrees higher than Emery's, and about five degrees higher than Badger's; by this, it is plain that my power would have far exceeded either of the others. As it did exceed Badger's, and fell but little behind Emery's, in the experiment, with two men on it weighing 269 lbs., it gave 356 turns to my band wheel and 13 lbs. hold back; and gave 292 turns of Emery's, with 27 lbs. hold back.

At the State Fair at Utica, I had again a new machine, which I was taking to a man in that county, to whom it had been contracted to before leaving home. Badger brought one, which he said that he had run sufficient to smooth it up, and that he meant to be prepared this time. Emery had the same one (as he said) that he had at Geneva, which he had run sufficient after leaving Geneva, to make it run in its easiest manner. Soon after setting my machine, the committee came to try them; they said that they had concluded to try all of the horse powers with the same machine; they declined to try them the same as was done at Geneva, to know whether they had there made an error or not. They put five men on each horse power, weighing 714 lbs., attached to the same machine; mine gave 1,390 revolutions of cylinder, Emery's 1,996, with his 38 $\frac{1}{2}$  inch band wheel, and 1,886 with his 42 inch band wheel, and Badger's gave 2,160, his band wheel being 36 inches. Each turn of the platform gave motion to the cylinder as follows:—mine 192, Emery's 172, Badger's 151. This shows that they both had more descent of the platform than mine, and thereby applying to each turn of the cylinder, equal to the difference in the motion of the platform, an increased amount of power. My power should have been elevated about 1 $\frac{1}{2}$  degrees higher than that of Emery, and about 3 degrees higher than Badger's, to have given the same perpendicular descent to each turn of the cylinder; this would have been sufficient, even with my new power, to have equalled either of the others.

The platforms of Emery's and Badger's powers moved more than twice the distance in a minute, that mine did, in

this last experiment, consequently descended more than twice the perpendicular height, thereby consuming more than twice the amount of power; yet they did not accomplish only about 1 $\frac{1}{2}$  of useful service. After the committee had got through with their experiments, I went to using my machine in threshing some, and in running the portable grist mills, which use caused it to run much easier than when the committee made their experiment. I then made some more experiments. I first tried to see what weight it would take to move it. We found that two men weighing about 360 lbs., would give the cylinder about 400 motions per minute: by adding another man of 160 lbs., making 250 lbs., it gave about 1,100 revolutions of cylinder. We then added another man of 133 lbs., making 653 lbs.—this gave about 1,800 revolutions. This showed a decided gain over the experiments of the committee, and exceeding the others according to the weight on the power.

As a proof of my faith in the superiority of these machines, I will let any person have one (who has a reputation for honesty, and has one of Emery's or Badger's,) of these machines upon trial—and if upon a fair trial, he does not concede it superior to either of the others, he may keep it for his trouble.

GEORGE WESTINGHOUSE.

Central Bridge, May 6, 1853.

These machines are made by G. WESTINGHOUSE & CO., at Central Bridge, Schoharie county, N. Y., to whom all orders should be addressed.

They also make a combined Thresher and Cleaner, to be used with the two-horse power; also Cleaners for the large lever powers.

These machines are warranted to give satisfaction to the purchaser upon trial, or they can be returned and the money refunded. The prices for this season, will be for

2 horse power and separator,.....	\$220 00
2 horse power and riddle,.....	150 00
1 horse power and riddle,.....	130 00
2 horse power, .....	\$110 00
1 horse power, .....	90 00
Separator,.....	110 00
Thresher and riddle, .....	40 00

The above prices include straps, and all things necessary to operate them. Single, the prices will be, without any driving strap, for horse power,

2 horse power, .....	\$110 00
1 horse power, .....	90 00
Separator,.....	110 00
Thresher and riddle, .....	40 00

We will deliver the two horse-power and thresher and riddle, at any point on the railroads or canals in this State, for \$8, or horse-power and Separator for \$10.

#### NEW-YORK AGRICULTOR,

AND FARM AND GARDEN.—PREMIUMS FOR SUBSCRIBERS—626 PRIZES, AMOUNTING TO \$5,385. While we are anxious to have our friends interest themselves in extending the circulation of our periodicals, we do not desire that they should labor without compensation. We therefore have made out the following premiums to be given to those who will act as our agents.

To the person sending us the largest number of subscribers, (and not less than 500),.....	\$500
2d highest, (and not less than 250),.....	250
3d highest, (and not less than 100),.....	100
4th highest, (and not less than 75),.....	75
5th highest, (and not less than 60),.....	60
6th highest, (and not less than 50),.....	50
5 next highest, (not less than 40), \$40 each,.....	200
10 next highest, (not less than 30), \$30 each,.....	300
15 next highest, (not less than 20), \$20 each,.....	300
30 next highest, (not less than 15), \$15 each,.....	450
60 next highest, (not less than 10), \$10 each,.....	600
500 next highest, (not less than 5),.....	\$2,500

626 Prizes, amounting to ..... \$5,385

Subscriptions to the *Agricultor* to be at \$2 a year, and to the *Farm and Garden* at \$1 a year. Two subscribers to the latter to be equivalent to one of the former. Subscribers for a shorter period to be counted proportionably, and the money in all cases to accompany the subscriptions.

The names to be forwarded as fast as they are obtained, with a note stating that they are sent for competition. The lists to be closed January 1, 1854.

#### THE UNSUCCESSFUL TO BE PAID.

To all persons who may be unsuccessful in obtaining a Premium, *We will pay a Commission of 25 per cent.*

Specimen numbers will be forwarded to all desiring them, on application, postage paid, to the undersigned.

ALLEN & CO., Publishers,

11—1t—mlt. Nos. 189 and 191 Water-st., New-York.

THE Transactions of the New-York State Agricultural Society, vols. 1 to 9, for sale at the Office of "THE CULTIVATOR," price \$1 per vol.

## Important to Wool Growers.

THE subscriber offers to sell Twenty-five pure SPANISH MERINO EWES, and Twenty LAMBS—also Twenty-five lambs bred from Spanish Ewes and a French Buck. The above sheep were not raised from stock that have been peddled for pure bred sheep, but were selected personally, by one of the best farmers of this county, from some of the best flocks in Vermont. Any one wishing to commence a good flock of sheep, will find a rare opportunity, as they will be sold at fair prices.

For any information wanted, address the subscriber at Otisco, Oneida Co., N. Y. N. H. NOYES.  
June 1—21—w2t—m2t.

## Prouty &amp; Mears' Plow.

A LARGE assortment of these celebrated Plows can be found at the North River Agricultural Warehouse and Seed Store, 53 Courtlandt street, New York.  
June 1—m1t. GEO. H. BARR & CO.

## Bulkley's Patent Dry-Kilns, for Grain, Flour, Meal and Lumber.

IGHTS, to use these dryers, for sale in any town or State in the Union. These machines kiln-dry by steam heated when necessary to 600 or 700 deg., and combining cheapness, compactness, safety and speed. They are built at less expense, occupy less room, take less fuel and power, less danger of fire, and are less liable to get out of repair, as well as capable of doing more work, and in a better manner than any other dryer. May be built portable or stationary.

A portable machine now in use in this place, which is 8 ft. long, 5 ft. high, and  $1\frac{1}{2}$  ft. wide, is drying meal at the rate of 650 lbs. per day, and cost to build, \$130. Larger sizes, and stationary machines cost less in proportion.

The sap from inch lumber may be removed in from 24 to 48 hours, by using the steam at 500 deg. Cost of machine to kiln-dry 2500 ft. per day, \$30 to \$40, including the cars to pass the lumber in and out of the dryer. May be built of any size. On a late trial, 1200 lbs of water were removed from 1000 ft. of lumber in 13 hours. Steam seasoning at 500 deg., increases the strength of lumber two-fifths to five-ninths, and it will then take a higher polish. See description in Scientific American, July 3, 1847, and March 26, 1853.

Address H. G. BULKLEY, or Hon. H. L. ELLSWORTH, LaFayette, Indiana.—May 26—w2t—m1t\*

## CAUTION!

## Ketchum's Patent Mowing Machine.

THE public will take notice, that in 1847, Letters Patent were granted to WILLIAM F. KETCHUM for improvements in Grain and Grass Harvesters, and re-issued on the 26th day of April, 1853, (for claims, a copy of which is given below.) That the undersigned are owners of said Patent right for the whole United States—except the State of Wisconsin, and will cause legal proceedings to be instituted against all persons who shall make, sell or use, machines in violation of said Patent. The public will further take notice, that no privilege to use these improvements has been granted to any one, except the right to use them—for the purpose of cutting grain only—in the Reaping Machines known as the New York Reaper, manufactured by Messrs. Seymour, Morgan & Co., of Brockport, N. Y.

The attention of the public is particularly called to the Machines manufactured by E. B. Forbush & Co., of Buffalo, and John Adriance, of Poughkeepsie, N. Y. These Machines are a direct and palpable infringement of our Patent, therefore any person making, selling or using said machine in any of the United States, except Wisconsin, must expect to be dealt with to the full extent of the law.

HOWARD & CO.

CLAIMS.—First. Placing the cutter bar and cutters lower than the frame of the Machine, and opposite the side of the plane of the wheel, in such a manner as to leave unobstructed space below the frame, and also between the wheel and the cutter, with their supports to allow the machine to pass freely and without clogging over the cut grass or grain, as set forth.

Second. Placing the cutters lower than the frame and axle, and in or nearly in the same vertical plane with the axle, on which the frame hangs and vibrates, and parallel or nearly so, to said axle, so that the vibrations of the frame, on uneven ground, shall not materially elevate or depress the cutters, as set forth.

Third. The endless chain of cutters in combination with the guard teeth, as described.

Buffalo, May 22, 1853.—m1t

## Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

## Morgan Horse General Giford.

THIS justly celebrated Horse will be kept the present season, at Lodi, Seneca county, New-York. He received the First Premium at the State Fair at Rochester, in September, 1851, and is regarded by experienced horsemen, as the best living specimen of this distinguished breed, is a perfect model in form, a sharp goer, with style and action unsurpassed. Terms of insurance Twenty dollars.

CHAS. W. INGERSOLL.

Lodi, April, 1853—17—lt—c2t.

Full Blooded English Draught Horse,  
SAMSON 2nd,

WILL stand this season at the residence of the subscriber, [known as the Shotwell Farm] between Aurora and Lavanna, Cayuga Co., N. Y.

Samson 2d was sired by my Imported Draught Horse, "Old Samson," out of my full blooded Mare "Megg," "Megg" by same horse, out of my Imported Mare, "Marget."

This valuable young Horse is the only one in the United States, that has more than half of the Original Samson Blood. He is a good dark bay color, with black legs; about 16 hands high; very compact, and possesses immense muscular power; is a kind and free worker; was six years old last summer, and weighs 1,555 lbs.

Terms, \$8.00 to ensure a Mare with foal, payable on the first March next. Mares to be regularly returned; accidents at risk of owners.

JOHN ROBINSON.

Lavanna, April 28, 1853—17—lt—m2t\*

## The Original Black Hawk.

THIS celebrated horse will stand this season at the stable of the subscriber, in Bridport, Addison County, Vermont.

To the Patrons of Black Hawk.—It is proposed by the owner, that the horse shall serve fifty mares this season—and those who would like to secure the services of the horse, will please send to the agent their names, (by letter or otherwise,) as those sending first, will be first served.

Good keeping will be provided for mares from a distance—and all accidents, escapes and thefts, will be at the risk of the owner.

N. B.—Terms for the use of said horse will be, for the season, \$50, payable in cash or satisfactory notes on demand, with interest; and all demands for past services of Black Hawk and Post Boy Morgan, must be immediately paid to David Hill, who is alone authorised to settle the same.

DAVID HILL, Agent.

Bridport, Addison Co., Vt., May 1, 1853—3t.

## To Flax Growers.

THE subscriber has invented and builds to order, a FLAX MACHINE, which, attended by two hands, is guaranteed to dress from three hundred to four hundred and fifty pounds of flax per day. The saving in labor and tow, by comparison, is considered equivalent to the cost of dressing flax by the best common machinery, used in this country and Europe. The new machine is made with care, to secure strength and durability, and can be run at a speed which requires more than two hands to attend it. Unrooted flax straw can be dressed by it. It can be driven by horse power or otherwise; and, being portable, can be sent any distance. For the present, the price of the machine complete, is \$400. Those who wish to obtain it in season to begin operations next autumn, will do well to apply soon.

S. A. CLEMENS.

Springfield, Mass., March 9, 1853.—m1f

## Suffolk Pigs,

OF pure blood, for sale by Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

## Valuable Farm for Sale.

THE subscriber offers for sale four hundred and fifty acres of land, being a part of his homestead, and comprising two hundred acres of as desirable land as any in Addison county—lying on the main road four miles north of Vergennes on the border of Lake Champlain, and one mile from the Railroad Station. It is under good cultivation, and furnished with commodious buildings. The remaining 250 acres is wood land; a portion of it covered with a heavy growth of hemlock and other valuable timber, and the remainder with the best quality of wood for fuel. The property will be sold together or in parcels. Postpaid inquiries promptly responded to.

ROWD T. ROBINSON,  
Ferrisburgh, Addison Co., Vt.

Aug. 1—tf.

## LONG ISLAND AGRICULTURAL WAREHOUSE.

Jerome &amp; Ellison,

(George F. Jerome—Jacob Ellison.)

BEG leave, respectfully to inform their friends and the public generally, that they have opened an Agricultural Store, at

NO. 297 PEARL STREET, NEW YORK,

Where will be found an assortment of the most approved Farm implements, among which are Manny's Convertible Reaper and Mower; Jerome's Belt Geared Horse Powers, with Thresher and Separator complete, Fanning Mills, Corn Shellers, Straw Cutters, Cultivators, Plows, Harrows, Iron Corn Mills, &c., also, Guano and other Fertilizers. We ask the particular attention of Farmers to



## Manny's Patent Combined Reaper and Mower,

Of which we have the exclusive right of Sale in the City of New York, and on Long Island, also an extended general right elsewhere.

This Machine was awarded a Silver Medal at the Ohio State Fair, as the best Reaper and Mower; received the highest award at the Michigan and Vermont State Fairs, as the best Reaper and Mower; and the First Premium of \$50, as a Mower, and second Prize of \$30 as a Reaper, at the great trial at Geneva, when it was tested in competition with eleven others, including the Worlds' Fair Reapers, (McCormick's & Hussey's,) and Ketchum's Celebrated Mowing Machine. The trial was under the direction of the New York State Agricultural Society, and occupied five days—the result shows a complete triumph of this Machine over all others and wherever exhibited, and its operation witnessed, it stand, first. More than Three Hundred of these Machines have been in operation the past season, all of which have given entire satisfaction.

It is just the machine the Farmer needs, as it will cut grass better than can be done with the scythe, leaving it spread evenly over the ground, and at the same time admits of being turned into a Reaper, with but a few minutes delay for putting in the platform for receiving the grain.

This Machine will cut from ten to fifteen acres per day. With two horses and one person to tend it when mowing, and two persons when reaping.

The grain is left at one side in gravels for binding, so that a whole field may be cut without moving any of the grain.

The cutting apparatus is perfect, and is connected by means of a joint, so as to be raised or lowered when moving along, to cut from one inch up to two feet from the ground. The cutters, or knives have a double edge so as to render it impossible to clog them.

The gearing is simple and easily accessible so as to be oiled and tightened. One great advantage it has over other machines is that the cogs of the large wheel are cast separate from and bolted to it, so that in case a cog breaks the whole wheel will not be lost, as is the case in Ketchum's and others, but new cogs can be put in without further trouble.

The whole Machine rests on Wheels so that there is no drag to it, and all side draft against the team is avoided. The machine is every way simple, convenient and durable and is the only successful combination of Reaper and Mower.

As a Mower it is as simple and perfect as though constructed expressly for mowing, and as a Reaper it is in every way simple and perfect as though constructed exclusively for Reaping. These machines whenever exhibited have received the highest encomiums from all those who own them, or have witnessed their operation. Testimony to their superiority over all other machines, and over the use of the scythe and cradle is given by thousands of practical farmers. These machines are warranted to cut grass and grain better than it can be done with a scythe, and cradle, and salt and sedge grass better than it can be done with a scythe, and to work to the satisfaction of the purchaser, or may be returned and the money will be refunded.

All farmers wishing to purchase machines for the coming season, will greatly oblige by sending in their orders as early as possible that the machines may be ordered, and a sufficient number manufactured to satisfy the demand. Our rule

will be to fill orders as they are received, that is those who first order will receive their machines first.

Price of the Mower and Reaper \$125, and expenses of transportation from the Manufactory.

WHEELER, MELICK & Co., Albany, are agents for the above machines.

New-York, April 15, 1853—16—1t—m1t.

## United States Agricultural Warehouse and Seedstore.

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on as good terms as any other house in this city.

We have among our assortment the far-famed and unequalled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shipping or using on plantation, arm or garden.

JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilizers.

Jan 1, 1853—m&w1f

## India-Rubber Gloves for Gardening,

HOUSE-CLEANING, driving, or any out-of-door work that soils the hands. They are made all lengths, to protect the wrists and arms from exposure, and by wearing, make the hands soft and white. LADIES' BLEACHING MITTS may be worn while sewing or sleeping. LADIES' DRESS PROTECTORS, to prevent the soiling of dresses by perspiration under the arms.

For sale by Bowen & McNamee, New-York; Norcross & Towne, Boston; Wileox, Billings & Co., Philadelphia; Falconer & Haskell, Baltimore; H. W. Shiffer, Charleston; Gill & Brother, St. Louis; Bart & Hiecox, Cincinnati; and by all Rubber dealers in the Union.

Sold at retail by country merchants generally.

April 12—m3t.\*

## Agricultural Implements.

STRAW AND STALK CUTTERS—of all patterns.

CORN MILLS—both of Iron and Burr Stone.

CORN AND COB CRUSHERS—of Beals', Nichols' and Sinclair's make.

ROAD SCRAPERS—of several patterns.

FANNING MILLS—of all the best makers.

SAUSAGE STUFFERS AND CUTTERS—of all patterns.

VEGETABLE OR ROOT CUTTERS—of approved kinds.

CORN SHELLERS—for hand and horse power.

VEGETABLE BOILERS—of Mott's and Bent's patterns.

GARDEN AND WHEEL BARROWS—of iron and wood.

HAY AND COTTON PRESSES—Bullock's patent.

BRICK MACHINES—of Hall's and other makers.

WAGONS AND CARTS.

PLOWS—of Prouty & Mears, Centre Draft, and Rich's Iron Beam PLOWS—Eagle, Massachusetts make, and Minor & Hortons.

For sale at the State Agricultural Warehouse, No. 25 Cliff Street, New-York.

Nov. 1—1t.

## Super-phosphate of Lime.

IN bags and barrels, made by C. B. DeBurgh, a warranted pure and genuine article, for sale by

GEO. DAVENPORT,

No. 5 Commercial, corner of Chatham-st., Boston,

Agent for the manufacturer, with directions for use.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

April 7—14—1t—m1t.

## Farm Dogs.

FOUR fine dog pups, from a Bull-Terrier sult, for sale.

Address by mail, A. B., Woodbridge, N. J.

May 12, 1853—19—1t—m1t\*

## Sale of Short Horned Cattle.

I WILL sell by Auction, at my residence, on Wednesday, 5th June next, at 1 o'clock P. M., about Thirty thorough bred Short horned Cattle. About twenty of them are Cows and Heifers, the remainder young Bulls. Nearly every animal is the produce of the Imported Bull "Yorkshireman" and 3d "Duke of Cambridge," bred by the late Thomas Bates Esq., of Kirkleavington, England, and "Earl of Seham" and "Vane Tempest," bred by John Stephenson, Esq., of Durham, England, and are of his famous Prince family.

The upset prices of these animals will be from \$150 to \$300, as to age, &c., &c.

I will also offer the above named Imported Bull, "Vane Tempest,"—his upset price is \$1000.

TERMS—Cash, or satisfactory notes at three months, payable at the Bank of Auburn, with interest.

I will also have for sale at that time a few South Down Rams and Suffolk Pigs.

Catalogues will be ready about 15th March next, and will be found with

A. B. Allen, Esq., 89 Water street, New York.

Sanford Howard, Esq., Cultivator office, Boston.

Luther Tucker, Esq., and B. P. Johnson, Esq., Albany.

L. F. Allen, Esq., Back Rock.

M. B. Bateyman, Esq., Columbus, Ohio.

W. T. Dennis, Esq., Richmond, Indiana, and with the subscriber.

J. M. SHERWOOD.

Auburn, N. Y., Feb. 24—9—e.o.m.—m.

## Farm Implements for California.

BURRALL'S PRIZE REAPERS, MOWERS, *Threshers*, *Separators*, *Clod Crushers*, *Field Rollers*, *Cultivators*, *Horse Powers*, &c., &c.—all warranted of the best material and workmanship. Strong, compact, and reliable, expressly for that market.

Made and sold cheap for cash, by THOMAS D. BURRALL, Geneva, Ontario Co., New-York.

Feb. 10, 1853—7—13t.—m3t.

## Forbush's Patent Reaper and Mower.

THIS machine is equally as well adapted for Mowing as Reaping. It combines more advantages and convenience than any other machine now in market. Price for Mower, \$110; for Mower and Reaper combined, \$125. A description will be sent, with full particulars, by addressing the Patentee's Agents, LONGETT & GRIFFING, No. 25 Cliff-street, New-York.

April 28, 1853.—17—5t—m1t.

## Albany Tile Works,

Corner Patroon and Knox Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices, suitable for land drainage, always on hand, in large or small quantities, of the first quality, delivered at the Docks and Railroad Depots free of cartage.

## Horse Shoe Tile.

4 $\frac{1}{2}$ inch calibre, \$18 per 1000 feet.
3 $\frac{1}{2}$ " " \$15 "
2 $\frac{1}{2}$ " " \$12 "

## Sole Tile or Pipe.

3 inches calibre, \$18 per 1000 feet.
2 " " \$12 "

Horse Shoe Hand Tile, 8 inches calibre, for drains around dwellings, at \$8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains, at \$4 per 100 feet—9 and 6 inch square, polished face Floor Tile, less than one-fourth the cost of marble, for basement floors and cellar pavements—9 and 6 inch square Bakers' Tile, for oven bottoms. Orders from a distance will receive prompt attention.

A. S. BABCOCK.

Albany, April 14, 1853—16—13t—c6m.

## Manures.

PERUVIAN GUANO, 2 $\frac{1}{2}$  to 2 $\frac{1}{2}$  cents per pound. BONE DUST, when taken in equal quantities, \$2.25 per barrel.

BONE SAWINGS, separately, \$2.50 per barrel.

PLASTER, \$1 to \$1.25 per barrel.

POTASH, 3 $\frac{1}{2}$  to 4 cents per pound.

CHARCOAL, \$1 per barrel.

SULPHURIC ACID, 2 $\frac{1}{2}$  to 2 $\frac{1}{2}$  cents per pound.

SUPERPHOSPHATE OF LIME, 2 $\frac{1}{2}$  cents per pound.

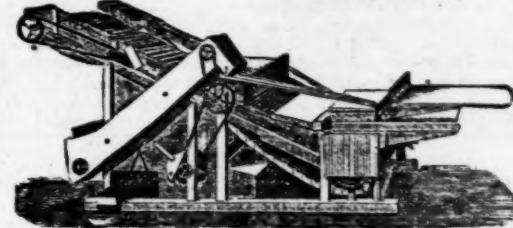
WOOD'S RENOVATING SALTS, one cent per pound. For sale at the State Agricultural Warehouse, No. 25 Cliff-street, New-York. LONGETT & GRIFFING.

Feb. 1—ctf.

## Grey Chittagong Fowls.

PURE blooded Chittagong Fowls and Eggs for sale, by W. BARNES, Bristol, Conn.

April 6—m3t\*

Agricultural Implement Manufactory,  
Corner of Carolina and Third-streets, Buffalo, N. Y.

PITTS' PATENT SEPARATOR—IMPROVED DOUBLE PINION HORSE POWER—PITTS' CORN AND COB MILL, &c.

I HEREBY give notice, that since the extension of the Patent right on my machinery for Threshing and cleaning grain, I have removed to Buffalo, N. Y., where I have permanently located, and erected a large establishment for the future manufacture of the above machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts—while the Horse Power, for strength, ease, durability, and cheapness of repair, is not surpassed by any in the United States. This Power is warranted to stand the full strength of eight horses, also to give as much effective or useful power when driven by one or two horses, as any other Horse Power, whether constructed on the endless chain or lever principle.

It was put on trial at the great exhibition of Horse Powers and Threshing Machines, at Geneva, in July last, 1852, where it received the New-York State Agricultural Society's first premium "for the best Horse Power for general purposes."

The Separator, at the same trial, also received the Society's first premium. My machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above machines are for sale at the Agricultural Works of the subscriber, in this city, all warranted to be a better article than can be purchased at any other shop, and if they do not prove on trial to be so, I will take them off the hands of the purchasers, at the price they may pay me for them.

I further notify all persons, who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringement of the rights secured to me by letters patent in the above machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above machines, hereafter, addressed to the subscriber, will receive prompt attention.

JOHN A. PITTS, Buffalo, N. Y.

April 14—16—1am—c6m

## Imported Horse Consternation.

THIS thorough bred horse has been exhibited repeatedly at the Fairs of the New-York State Agricultural Society, and by the unanimous voice of every committee that has viewed him, has been pronounced the best thorough bred horse that ever passed under their inspection. His pedigree will be found complete in Derby & Miller's edition of Youatt, and can be confirmed in every particular by reference to breeder's certificates, the English racing calendar, and English Stud Book now in possession of his owner.

His stock has been proved in Oneida county, where some of his colts are four and five years old—and any person may be satisfied of their great superiority by inquiring of almost any farmer, or horseman in Rome, Lee, or Western.

He will stand the coming season, as heretofore, at the farm of the subscriber, two miles west of Syracuse, and adjoining the village of Geddes.

TERMS—Ten dollars the season, and fifteen dollars to insure. The money to be paid in advance in all cases. When a mare is insured and left at the farm, or regularly returned to the horse until the groom is satisfied that she is in foal, a receipt will be given, promising to refund the money in case the mare was not in foal.

Pasturage furnished at three shillings per week. All mares at the risk of the owner in all respects. J. B. BURNET.

Syracuse, May 1, 1853—m3t.

## Fowls for Sale.

THE subscriber, having been engaged for several years in procuring from the most reliable sources, the best imported breeds of fowls, has now on hand choice specimens of the White, Red, and Buff Shanghais, Brahmapootra, Royal Cochinchina, Black Spanish, Dorking and several varieties of the Pheasant Breeds of Fowls.

April 7, 1853—14—11—m2t.

V. S. SMITH,

Buffalo.

## New-York Agricultural Warehouse.

**PERUVIAN GUANO**—Just received per ship *Grecian*, first quality Peruvian Guano.  
No. 1 Super-phosphate of Lime constantly on hand; also, Agricultural and Horticultural Implements, and Field and Garden Seeds—the largest and most complete assortment to be found in the United States. **R. L. ALLEN**,  
Nos. 189 & 191 Water-st., New-York.  
May 19—w—20, 23, 26, 27—mt.

## Harvest Implements.

**MOWING AND REAPING** Machines of different patterns, and of the best kinds in market.  
Seythes, Snaths, Cradles, and large Hand Rakes, made expressly for raking after the cart; also Horse Hay Rakes. Pitchforks, very superior, of elastic steel.  
Threshing Machines and Fan Mills, combined or single.  
Horse Powers of the most approved kinds, such as the Endless-chain or Railway, Circular, Cast Iron, &c.  
Ruta Baga, Turnep, Cabbage, and all other sorts of Field and Garden Seeds. **R. L. ALLEN**,  
189 & 191 Water-st., New-York.  
May 19—w—20, 23, 26, 29—mt.

## Water Cure.

WE have just received the annual report of the New-Graefenberg Water Cure Establishment, for last year, of all the cases heretofore treated at that Institution, together with a detailed statement of many cases, written by the patients themselves, under their own names. Some of these are of a most remarkable character, and come from sources of the highest respectability. A candid examination of this report cannot fail to convince all of the superior efficacy of this mode of treatment, and the remarkable success of this Institution, which is one of the oldest, as it is one of the best in the country. To any making application by mail, post-paid, a copy will be sent gratis. Address R. HOLLAND, M. D., New-Graefenberg, N. Y.—Water Cure Journal. June 1—lt\*

## Morgan Breeding Mare For Sale.

**A GENUINE** Morgan Mare, of the "Sherman" branch, a ten years old, rich brown color, of great beauty, speed and strength, now in foal by the "Manchester, N. H. Black Hawk," a colt of the Bridgport Black Hawk; foals in June. Stowe, Vt., May 5, 1853. **J. B. WHEELER**.  
20—4t.—mt.

## Land For Sale.

THE undersigned is authorized to sell, and now offers for sale a tract of land, between 4,000 and 5,000 acres, lying in the town of Stowe, Lamoille county, Vt., being the lands and titles owned by the late Hon. Azarias Williams, of Concord. The land lies 10 miles from the Vermont Central railroad, is heavily covered with Spruce, Hemlock and Hard Timber. The timber never has been cut.

Also a Farm of 200 acres, with comfortable buildings, good water, 60 acres of intervalle, 60 acres of pasture, the residue in wood and timber, including a good Maple orchard. With the farm, at the option of the purchaser, will be sold a good set of tools, and some choice stock.

Terms for the Land, Farm, Stock and Tools, \$10,000.—Land, \$6,500. Farm, \$3,500.  
Address JOHN B. WHEELER, Stowe, Lamoille co., Vt.  
20—4t.—mt.

## Manures.

**FERTILIZERS** of all kinds for sale by the subscribers.  
**IMPROVED SUPER-PHOSPHATE OF LIME**, Super-phosphate of Lime—both the above made after the recipe of Prof. Mapes.

**PERUVIAN GUANO**, Sulphuric Acid, Bone-Dust, Potash, Sparlings, Poudrette, Plaster of Paris, &c., &c.

**GEO. H. BARR & CO.**,  
53 Courtland street, N. Y.  
June 1—mt.

## SEEDS!

THE undersigned being aware of the strong prejudice existing among Market Gardeners and others, in relation to seeds as usually sold by Agricultural Warehouses, have engaged the services of Mr. James Hogg, so long known to the public as a competent Seedsman, and have placed this department of their business under his control. They have also made arrangements with Prof. Mapes, and others engaged in seed raising, to furnish them with an assortment of the choicest seeds. Their Foreign and California arrangement will ensure, in addition to garden seeds, a fine assortment of Bulbs, Flower Seeds, &c., &c.

**GEO. H. BARR & CO.**,  
North River Agricultural Warehouse,  
June 1—mt.

53 Courtland-street, N. Y.

## North River Agricultural Warehouse.

No. 53 Courtland Street, New York.

**GEO. H. BARR & CO.** invite the attention of Farmers, Planters and others, to their large and varied assortment of Agricultural Implements, Manures, Seeds, &c., &c., all of which will be furnished at the lowest prices. Their assortment includes

**PLOWS**—All the improved kinds by the most approved makers.

**HORSE POWERS**—Of all kinds and sizes, with and without Thrashers, &c.

**CORN SHELLERS**—All the approved kinds, and some of recent introduction.

**STRAW CUTTERS**—Of all sizes and kinds, for hand and horse power.

**CORN AND COB CRUSHERS**—Of all kinds and sizes.

**FANNING MILLS**, Cultivators, Harrows, Churns, of all the approved kinds, Rakes, Hoes, Forks, and a general assortment of Horticultural and Garden tools. June 1—mt.

## Durham Bull For Sale.

**A THOROUGH** bred Durham Bull, three years old March 1853. A fine *sure* animal, from *Dam*, Beauty 4th, by Pontiac (125 A. H. B.) *Sire*, Major (125 A. H. B.)

**JOHN H. BAKER**.

South Oyster Bay, L. I., May 19—w&mt\*

## A Virginia Farm For Sale.

**PLEASANTLY** situated in Fairfax county, 13 miles from Alexandria, 16 miles from Washington, and about  $1\frac{1}{2}$  miles from Lee station, on the Alexandria and Orange railroad, a farm of 218 acres, about one-half intervalle or bottom land, the residue a gentle swell of upland. It is admirably adapted to grazing, and is well watered with two small streams of never failing water, and is capable of producing excellent crops of corn, wheat, potatoes, grass, &c. The location is healthy, and the markets as good as any in this country. On the premises is a young and thrifty orchard of 125 apple trees, 25 peach trees, pear, cherry trees, &c. Also a timber lot of 20 acres, (hard-wood,) and 50 acres second growth pine, which will yield 40 cords per acre, worth \$2 per cord at the railroad,  $1\frac{1}{2}$  miles distant. There is a small dwelling house and other buildings on the farm. The fences are tolerable, 2000 new chestnut rails having been added to the fences within two years. Price \$10 per acre; one half in hand, the balance in two years. Persons desirous of examining the premises, will call upon ANSEL WHEDON, Agent, near Lee station. For further information, address

**A. & O. WHEDON**.  
West Pawlet, Vt.

## THE CULTIVATOR:

A MONTHLY JOURNAL OF

**Agriculture, Horticulture, and Domestic Economy.**

**THE PRICE REDUCED TO 50 CENTS A YEAR.**

This standard **AGRICULTURAL** **MONTLY** commences with the new year, its **THIRD SERIES**. It is published in the same superior style, and will now be more valuable than ever, as the choicest **Agricultural** and **Horticultural** articles in **THE COUNTRY GENTLEMAN** will appear in its pages. The price hereafter will be as follows:

Single copies, Fifty Cents—Eight copies \$3—any larger number at the same rate.

All subscriptions must commence with the January No., and the payments must in all cases accompany the order for the paper.

**LUTHER TUCKER**,  
Publisher, Albany, N. Y.

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At 395 Broadway, Albany, N. Y.

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To mail Subscribers, \$2.00 a year, if paid in advance—or \$2.50 if not paid in advance.

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